ORDER NO. AD9106158C5
A6

Service Manual

Cassette Deck
RS-E10

Dolby NR-Equipped
Stereo Cassette Deck

DOLBY B·C NR HX PRO

Color

(S)...Silver Type

Area

Country Code	Area	Color
(PP)	U.S.A./Canada.	(S)
(E)	Continental Europe.	
(EB)	Great Britain.	
(EG)	F.R. Germany and Italy.	

System Name	Unit	
SC-E10 (PP, E, EB, EG)	Tuner Amplifier CD Player Cassette Deck Speaker	SA-E10 SL-E10 RS-E10 SB-EX2 (E, EB, EG)
SC-E30 (PP)	Tuner Amplifier CD Player DAT	SA-E10 SL-E10 SV-E10

*HX Pro headroom extension originated by Bang Olufsen and manufactured under license from Dolby Laboratories Licensing Corporation.
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RS-TR555 MECHANISM SERIES (AR350)

SPECIFICATIONS

■ CASSETTE DECK SECTION

Deck system	Stereo cassette deck
Track system	4-track, 2-channel
Recording system	AC bias
Bias frequency	80 kHz
Erasing system	AC erase
Heads	Recording/Playback head (Permalloy) × 1 Erasing head (Double-gap ferrite) × 1
Motors	Capstan drive (DC servo motor) × 1 Reel table drive (DC motor) × 1 Loading drive (DC motor) × 1
Tape speed	4.8 cm/sec. (1-7/8 ips)
Wow and flutter	0.07% (WRMS)
For (E, EB, EG) areas only	±0.2% (DIN)
Fast forward and rewind times	Approx. 90 seconds with C-60 cassette tape
Frequency response (Dolby NR off)	
NORMAL	30 Hz～15 kHz, ±3 dB
For (PP) area	20 Hz～18 kHz
For others	20 Hz～17 kHz (DIN)
CrO$_2$	30 Hz～16 kHz, ±3 dB
For (PP) area	20 Hz～18 kHz
For others	20 Hz～17 kHz (DIN)
MEATAL	30 Hz～17 kHz, ±3 dB
For (PP) area	20 Hz～19 kHz
For others	20 Hz～18 kHz (DIN)

S/N (signal level=max recording level, CrO$_2$ type tape)	
NR off	56 dB (A weighted)
Dolby B NR on	66 dB (CCIR)
Dolby C NR on	74 dB (CCIR)
Input sensitivity and impedance	
LINE IN	60 mV/47 kΩ
Output voltage and impedance	
LINE OUT	400 mV/800 Ω

■ GENERAL

Power consumption	23 W
Power supply	
For (PP) area	AC 60 Hz, 120 V
For others	AC 50/60 Hz, 230－240 V
Dimensions (W × H × D)	445 × 97 × 327 mm (17-17/32" × 3-13/16" × 12-7/8")
Weight	5 kg (11 lb.)

Note:
Specifications are subject to change without notice.
Weight and dimensions are approximate.

Technics

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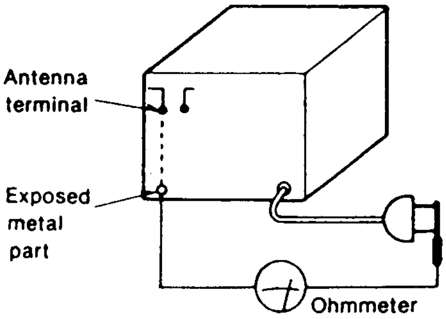
■ SAFETY PRECAUTION (This "safety precaution" is applied only in U.S.A.)

1. Before servicing, unplug the power cord to prevent an electric shock.
2. When replacing parts, use only manufacturer's recommended components for safety.
3. Check the condition of the power cord. Replace if wear or damage is evident.
4. After servicing, be sure to restore the lead dress, insulation barriers, insulation papers, shields, etc.
5. Before returning the serviced equipment to the customer, be sure to make the following insulation resistance test to prevent the customer from being exposed to a shock hazard.

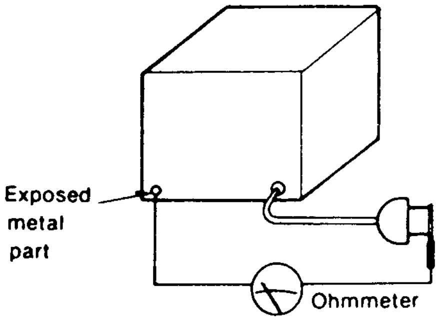
• INSULATION RESISTANCE TEST

1. Unplug the power cord and short the two prongs of the plug with a jumper wire.
2. Turn on the power switch.
3. Measure the resistance value with ohmmeter between the jumpered AC plug and each exposed metal cabinet part, such as screwheads antenna, control shafts, handle brackets, etc. Equipment with antenna terminals should read between 3MΩ and 5.2MΩ to all exposed parts. (Fig. A) Equipment without antenna terminals should read approximately infinity to all exposed parts. (Fig. B)

Note: Some exposed parts may be isolated from the chassis by design. These will read infinity.



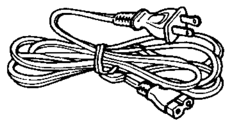
(Fig. A)
Resistance = 3MΩ—5.2MΩ



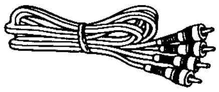
(Fig. B)
Resistance ≈ Approx ∞

4. If the measurement is outside the specified limits, there is a possibility of a shock hazard. The equipment should be repaired and rechecked before it is returned to the customer.

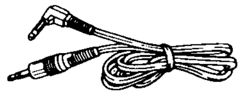
■ ACCESSORIES



AC power supply cord
(SFDAC05E03)...... (E, EG)
(SJA172).............. (PP) .... 1 pc.
(SJA188).............. (EB)



Stereo connection cables
(SJP2249-3).............................. 2 pcs.



Stereo mini cable for remote-control (SJP2257T) .... 1 pc.

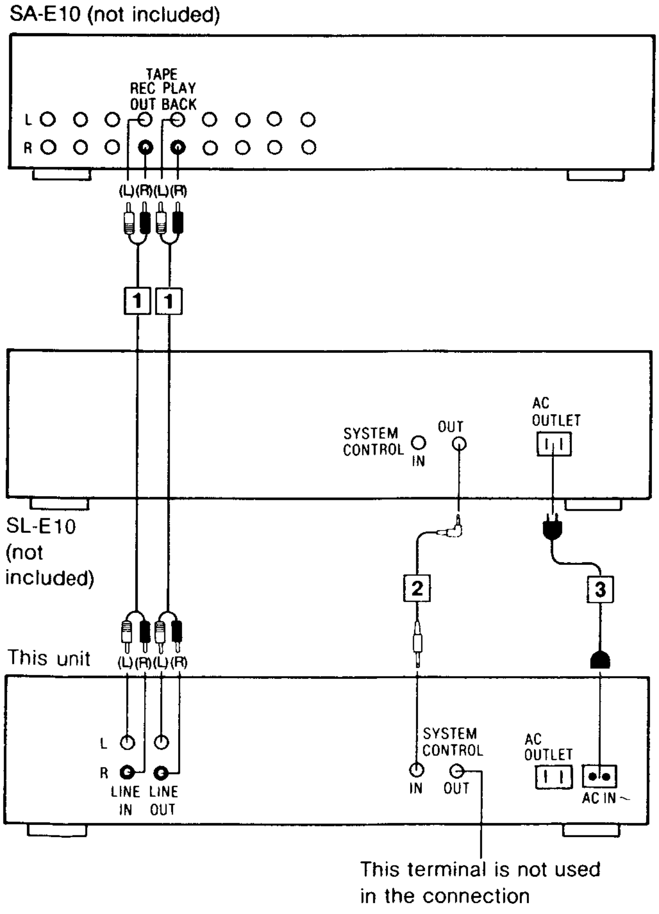
Note: Configuration of AC power supply cord differs according to area.

■ CONNECTIONS

Before making connections, be sure that the power to this unit and all other system components is first turned off.
See the operating instructions of the tuner amplifier (SA-E10) or the compact disc player (SL-E10) for details.

Make connections to each component by using the included cord and cables.

Make sure to check in the ☐ each time one connection is finished.


SA-E10 (not included)
TAPE
REC PLAY
OUT BACK
L
R
(L)(R)(L)(R)
1
1
SYSTEM CONTROL
OUT
IN
AC OUTLET
SL-E10 (not included)
2
3
This unit
(L)(R)(L)(R)
L
R
LINE IN
LINE OUT
SYSTEM CONTROL
IN
OUT
AC OUTLET
AC IN~
This terminal is not used in the connection

☐ 1 Connect the stereo connection cables.

☐ 2 Connect the stereo mini cable for remote-control.

☐ 3 Connect the AC power supply cord.

"AC OUTLET" (UNSWITCHED)

Power is always available, regardless of the unit's power switch setting.
Audio equipment rated up to 55W can be connected.

For (EB) area

Cut off and dispose of the plug and replace with a suitable plug.

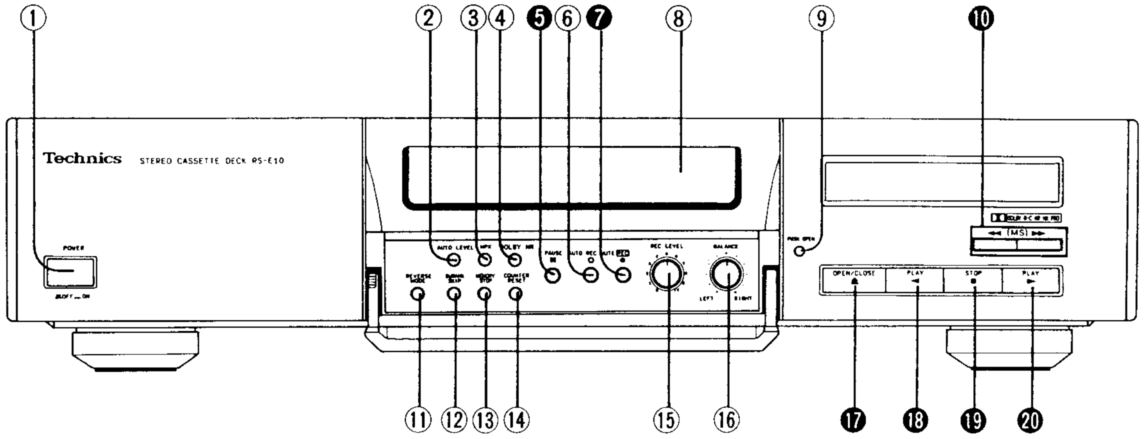
Household
AC outlet

Fit a suitable plug to the AC power supply cord.

Concerning the remote control operation

This unit can be controlled by using the remote-control transmitter included with SA-E10 (not included).
See the operating instructions of SA-E10 for detailed information.

■ LOCATION OF CONTROLS



Control section

The functions indicated by the numbers with black background (for example ❺) can be activated from both the main unit and the remote control transmitter included with SA-E10.

① Power switch (POWER)......For PP area

Press (▮_▬) to switch the power on.
Press again (▬_▮) to switch the power off.

Power "STANDBY ⏻/ON" switch...For others (POWER ▮ STANDBY ⏻ ▬ ON)

This switch switches ON and OFF the secondary circuit power only. The unit is in the "standby" condition when this switch is set to the STANDBY ⏻ position. Regardless of the switch setting, the primary circuit is always "live" as long as the power cord is connected to an electrical outlet.

② Auto recording level button (AUTO LEVEL)

This button is used to set the proper recording level automatically.

③ Multiplex filter button (MPX)

This button is used during the recording of an FM stereo broadcast that employs Dolby noise reduction so as to prevent misoperation of the Dolby noise reduction.

④ Dolby noise-reduction button (DOLBY NR)

This button is used to reduce the hissing noise heard from the tape. This unit is provided with both the B-type and C-type noise-reduction systems.

❺ Pause button (❚❚ PAUSE)

This button is used to temporarily stop the tape playback or recording of the deck.

⑥ Automatic-record-muting button (○ AUTO REC MUTE)

This button is used to make a silent interval on the tape while recording is in progress.

❼ Record button (● REC)

This button is used to set the deck to the recording stand-by mode.

⑧ Cassette tray

⑨ Panel open button (PUSH OPEN)

❿ Rewind/fast-forward search button (◀◀ (MS) ▶▶)

These buttons are used to advance or rewind the tape, or to easily and quickly search for the program's beginning of the tape.

⑪ Reverse-mode button (REVERSE MODE)

This button is used for selection of the reverse mode (for either playback or recording.)

⑫ Blank skip button (BLANK SKIP)

This button is used to skip a silent portion on the tape.

⑬ Memory-stop button (MEMORY STOP)

This button is used to rewind the tape to the preset point.

⑭ Tape counter reset button (COUNTER RESET)

This button is used to reset the tape counter indication to "00.00".

⑮ Recording-level control (REC LEVEL)

This control is used to regulate the recording level

⑯ Recording-balance control (BALANCE)

This control is used to balance the left and right sound levels during recording.

⓱ Cassette tray open/close button (⏏ OPEN/CLOSE)

⓲ Reverse-side playback button (◀ PLAY)

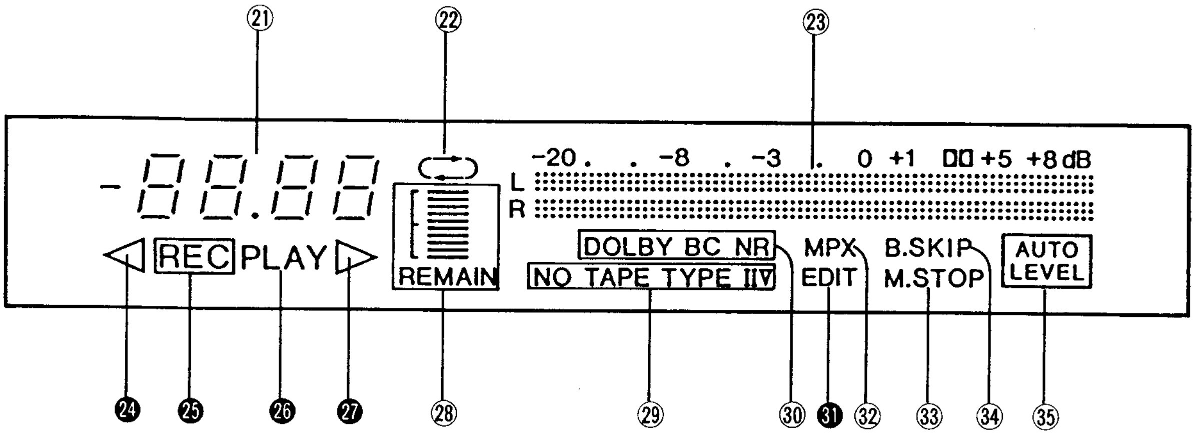
This button is used to start the playback or recording of side "B" of the cassette.

⓳ Stop button (■ STOP)

This button is used to stop the tape movement.

⓴ Forward-side playback button (▶ PLAY)

This button is used to start the playback or recording of side "A" of the cassette.



Display section

The indicators with black background (for example ㉔) is accessible by using a compatible remote control transmitter included with SA-E10.

㉑ Tape counter

Indicates the amount of tape movement.

㉒ Reverse-mode indicator (⊂⊃)

Illuminates to show which of the reverse modes was selected by the reverse-mode button.

㉓ Input level meter

During playback, this meter indicates the level of the recorded sound.
During recording, it indicates the level being recorded, adjusted by the recording-level control.

㉔ Reverse-side indicator (◁)

Illuminates during playback or recording to indicate that side "B" of the tape is being used.

㉕ Recording indicator (REC)

Illuminates to indicate that this unit is in the recording stand-by mode or is recording.

㉖ Playback indicator (PLAY)

When this indicator illuminates steadily, it indicates that this unit is in the playback or recording mode.
When flashing, indicates that this unit is in the pause mode or in the recording stand-by mode.

㉗ Forward-side indicator (▷)

Illuminates during playback or recording to indicate that side "A" of the tape is being used.

㉘ Tape remain display (REMAIN)

Indicates the approximate amount of tape remaining.

㉙ Tape-select indicators

The type of tape being used will be automatically detected. The corresponding indicator illuminates to show the tape type. "NO TAPE" is displayed when the cassette tape is not inserted.

㉚ Dolby noise-reduction indicator

Illuminates to show the type of Dolby noise-reduction system selected by pressing the Dolby noise-reduction button.

㉛ Edit indicator (EDIT)

Illuminates to indicate that this unit is in the CD edit-recording mode by using the remote-control transmitter included with SA-E10.

㉜ Multiplex filter indicator (MPX)

Illuminates when the multiplex filter button is pressed.

㉝ Memory stop indicator (M. STOP)

Illuminates to indicate that this unit is in the memory stop mode.

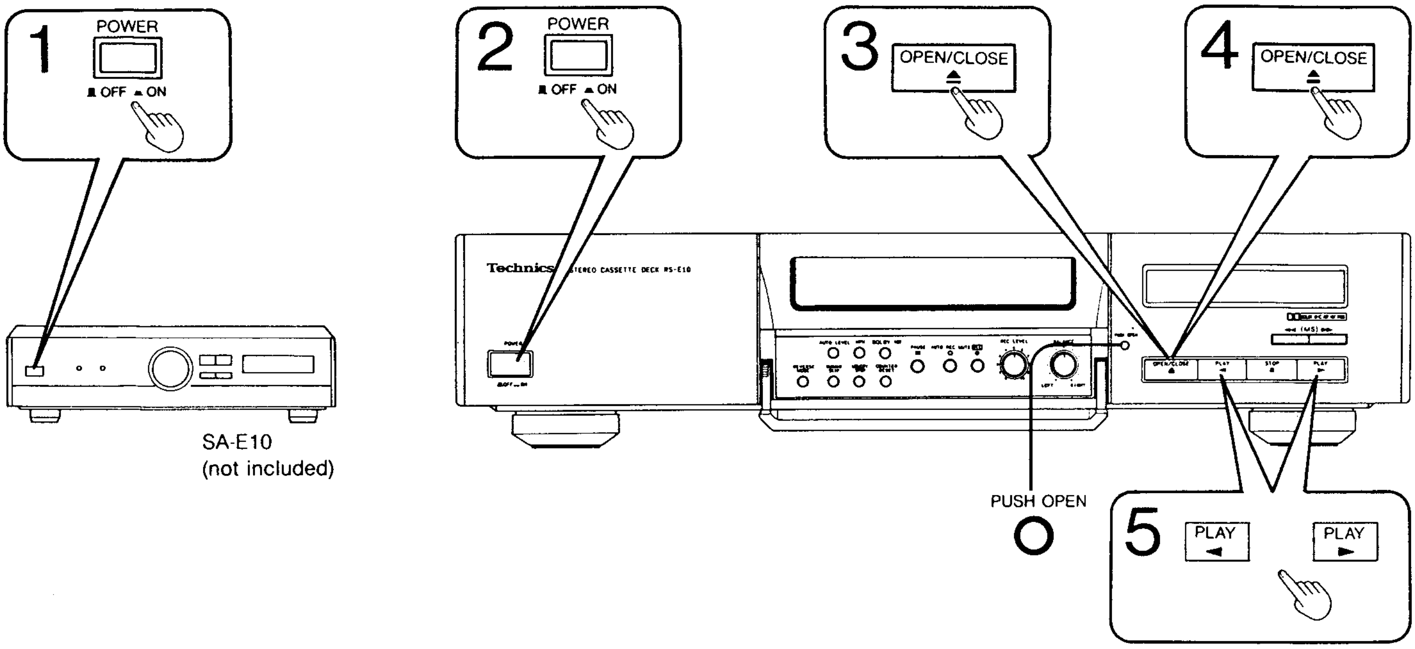
㉞ Blank skip indicator (B. SKIP)

Illuminates to indicate that this unit is in the blank skip mode.

㉟ Auto recording level indicator (AUTO LEVEL)

Illuminates to indicate that this unit is in the auto recording level adjustment mode.

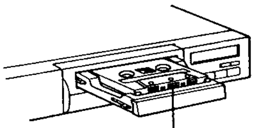
• Basic Operating Procedure for Playback


1
POWER
OFF ON
2
POWER
OFF ON
3
OPEN/CLOSE
4
OPEN/CLOSE
Technics
SA-E10
(not included)
PUSH OPEN
5
PLAY
PLAY

1 **Set the power switch of SA-E10 to ON.**

2 **Set the power switch to ON.**
When the power switch of this unit is switched to ON, the power supply can be switched ON and OFF by using the switch on the SA-E10 (not included).

3 **Press the cassette tray open/close button to open cassette tray, and then insert the cassette tape.**



(The part of the cassette where the tape is exposed should face toward you.)

4 **Press the cassette tray open/close button to close cassette tray.**

5 **Press the playback button.**
See page 8 for detailed information of the operation.

To open the panel

Press the panel open button.

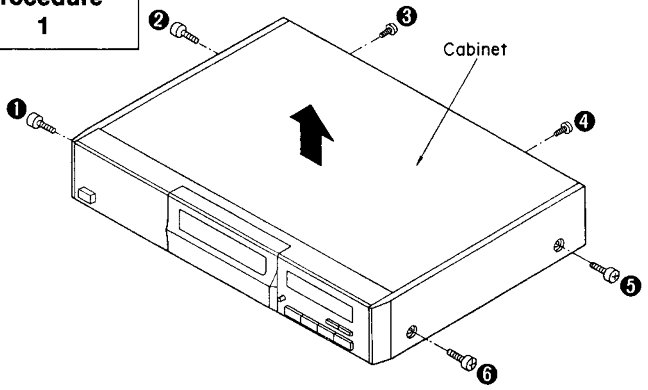
■ DISASSEMBLY INSTRUCTIONS

"ATTENTION SERVICER"

Some chassis components may have sharp edges. Be careful when disassembling and servicing.

Ref. No. 1 | **Removal of the cabinet**

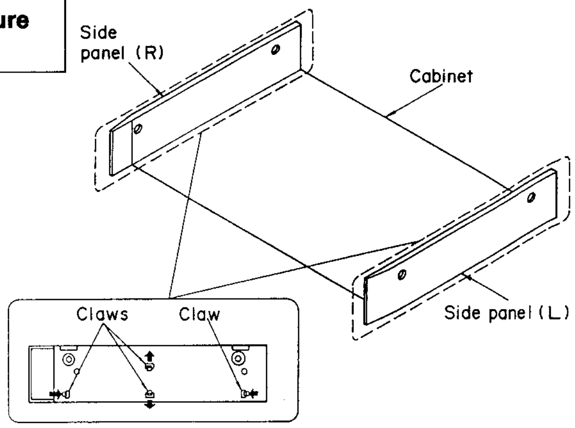
Procedure 1


❷
❸
Cabinet
❶
❹
❺
❻

- Remove the 6 screws (❶~❻).

Ref. No. 2 | **Removal of the side panels (L)・(R)**

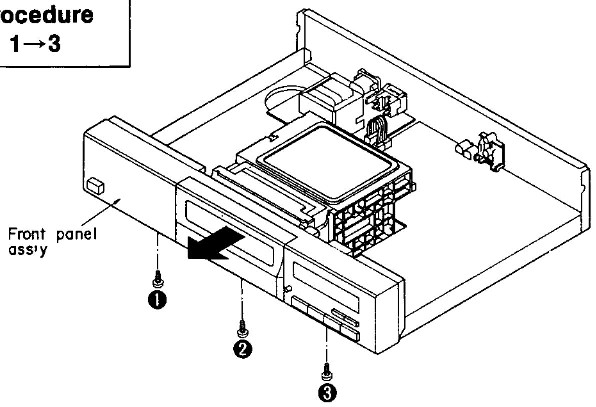
Procedure 1→2


Side panel (R)
Cabinet
Claws
Claw
Side panel (L)

- Release the 8 claws.

Ref. No. 3 | **Removal of the front panel ass'y**

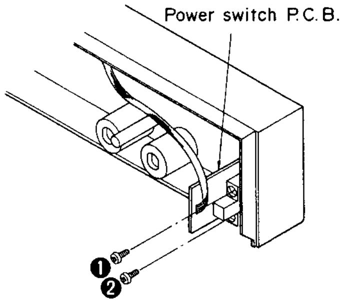
Procedure 1→3


Front panel ass'y
❶
❷
❸

1. Remove the 3 screws (❶~❸).
2. Remove the front panel ass'y in the direction of arrow.

Ref. No. 4 | **Removal of the power switch P.C.B.**

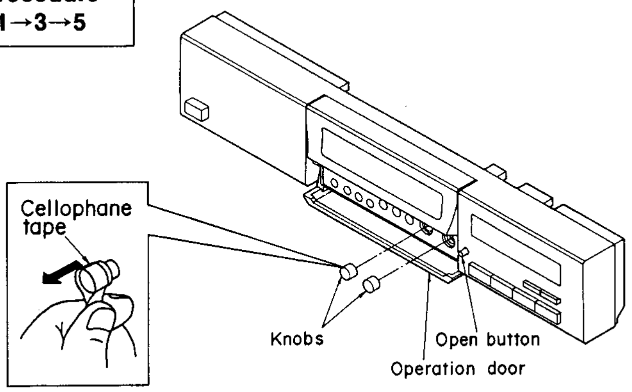
Procedure 1→3→4

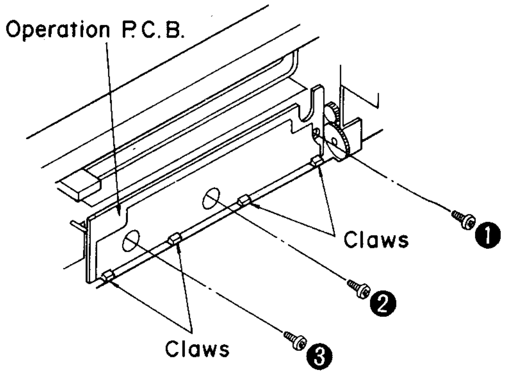

Power switch P.C.B.
❶
❷

- Remove the 2 screws (❶, ❷).

Ref. No. 5 | **Removal of the operation P.C.B.**

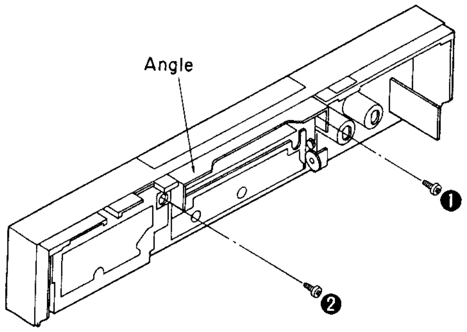
Procedure 1→3→5


Cellophane tape
Knobs
Open button
Operation door


Operation P.C.B.
Claws
❶
❷
Claws
❸

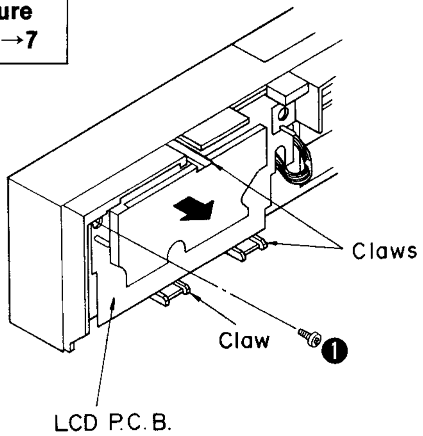
1. Push the open button and open the operation door.
2. Pull out the 2 knobs.
3. Remove the 3 screws (❶~❸).
4. Release the 4 claws.

Ref. No. 6	**Removal of the angle**
Procedure **1→3→6**	



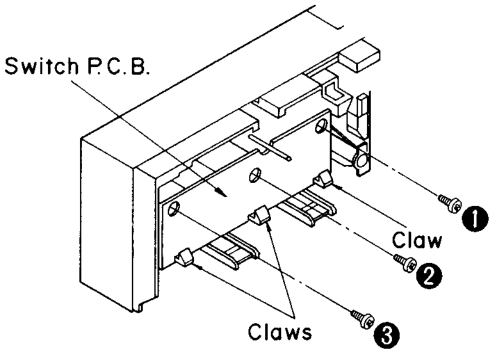
- Remove the 2 screws (❶, ❷).

Ref. No. 7	**Removal of the LCD P.C.B.**
Procedure **1→3→6→7**	


Claws
Claw
❶
LCD P.C.B.

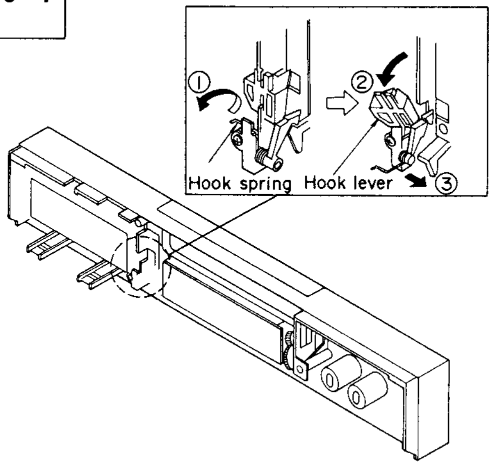
1. Remove the 1 screw (❶).
2. Release the 3 claws and remove the LCD P.C.B. in the direction of arrow.

Ref. No. 8	**Removal of the switch P.C.B.**
Procedure **1→3→6→7→8**	

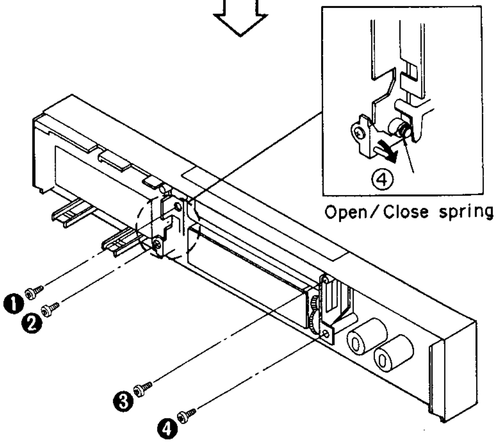

Switch P.C.B.
❶
Claw
❷
Claws
❸

1. Remove the 3 screws (❶~❸).
2. Release the 3 claws.

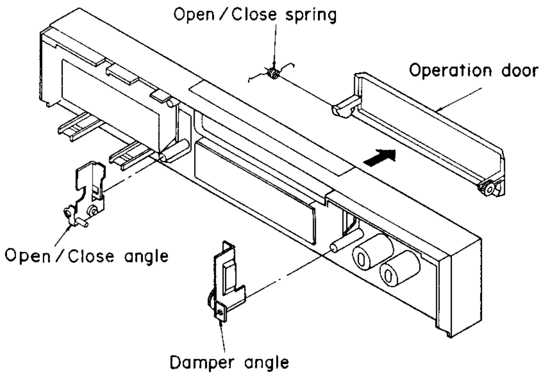
Ref. No. 9	**Removal of the operation door, open/close angle and damper angel**
Procedure **1→3→5→6→7→9**	


①
②
Hook spring
Hook lever
③

1. Remove the hook spring in the direction of arrow ①.
2. Remove the hook lever in the direction of arrow ②, ③.


④
Open/Close spring
❶
❷
❸
❹

3. Remove the open/close spring in the direction of arrow ④.
4. Remove the 4 screws (❶~❹).

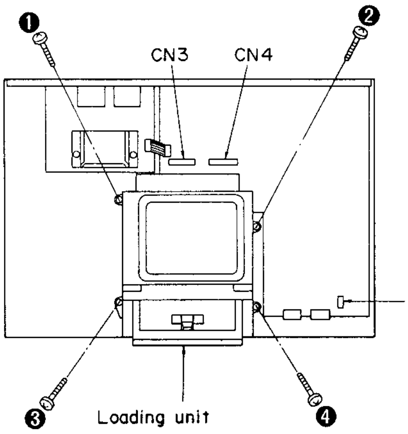

Open/Close spring
Operation door
Open/Close angle
Damper angle

5. Remove the operation door, open/close angle and damper angle.

Ref. No.
10

Removal of the loading unit

Procedure
1→3→10

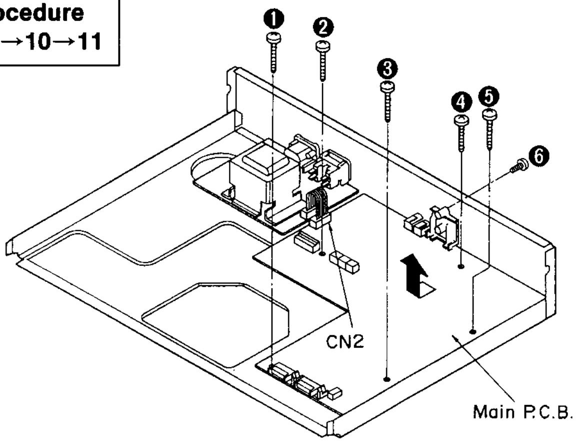

❶
❷
CN3
CN4
CP1
❸
Loading unit
❹

1. Remove the 2 flat cables of 2 connectors (CN3, CN4).
2. Remove the 1 connector (CP1).
3. Remove the 4 screws (❶~❹).

Ref. No.
11

Removal of the main P.C.B.

Procedure
1→3→10→11

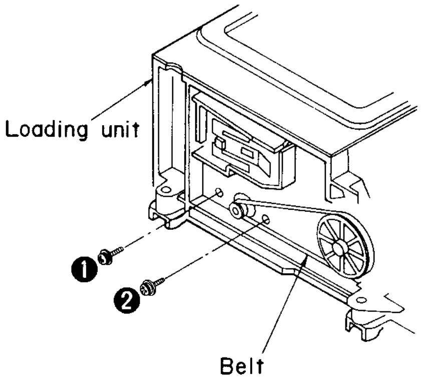

❶
❷
❸
❹
❺
❻
CN2
Main P.C.B.

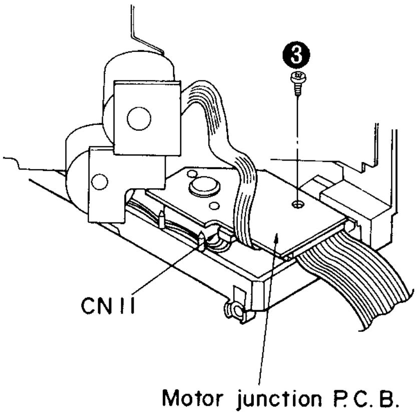
1. Remove the 1 flat cable of connector (CN2).
2. Remove the 6 screws (❶~❻).
3. Remove the main P.C.B. in the direction of arrow.

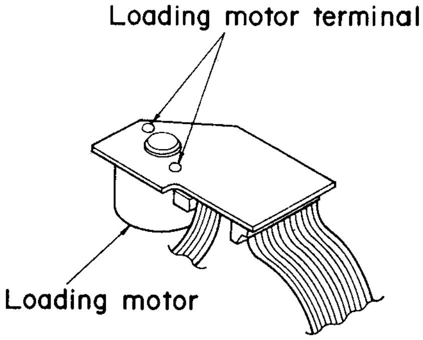
Ref. No.
12

Removal of the loading motor and motor junction P.C.B.

Procedure
1→3→10→12


Loading unit
❶
❷
Belt


❸
CN11
Motor junction P.C.B.

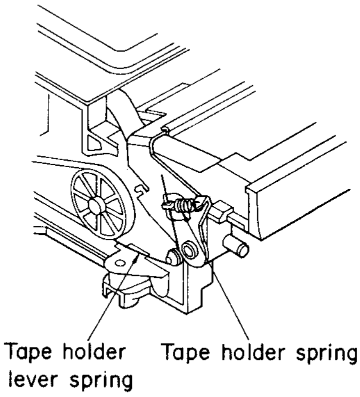

Loading motor terminal
Loading motor

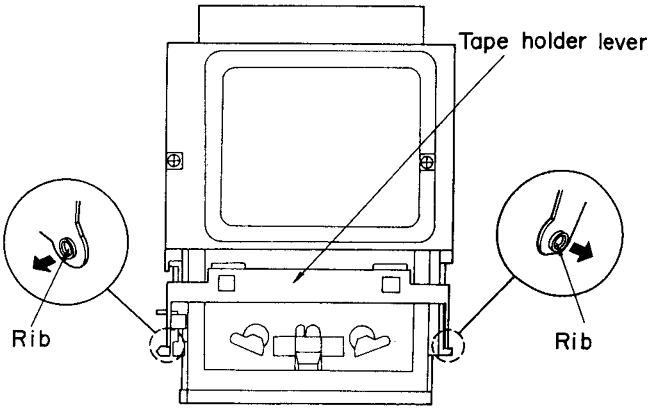
1. Remove the 2 screws (❶, ❷).
2. Remove the belt.
3. Remove the 1 connector (CN11).
4. Remove the 1 screw (❸).
5. Unsolder the 2 terminals of loading motor.

Ref. No.
13

Removal of the tape holder lever

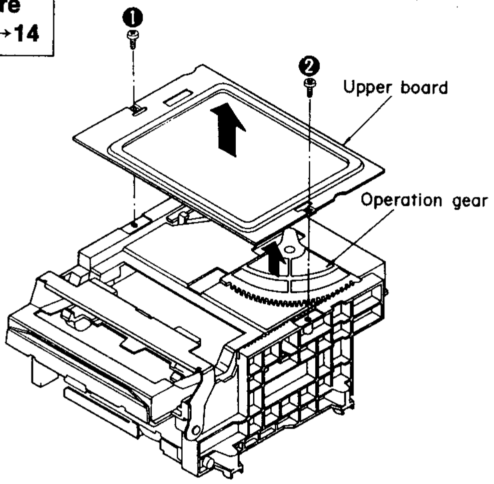
Procedure
1→3→10→13


Tape holder lever spring
Tape holder spring


Tape holder lever
Rib
Rib

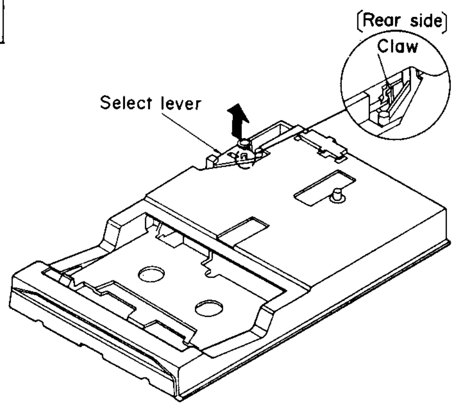
1. Remove the tape holder lever spring and tape holder spring.
2. Extend the tape holder lever in the direction of arrow, and remove it from rib.

Ref. No. 14	Removal of the upper board and operation gear
Procedure 1→3→10→14	


❶
❷
Upper board
Operation gear

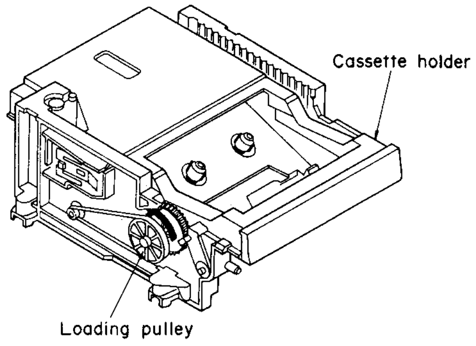
- Remove the 2 screws (❶, ❷).

Ref. No. 16	Removal of the select lever
Procedure 1→3→10→13 →14→15→16	

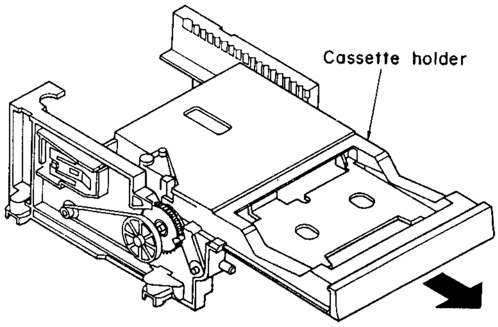

Rear side
Claw
Select lever

1. Release the 1 claw.
2. Remove the select lever in the direction of arrow.

Ref. No. 15	Removal of the cassette holder
Procedure 1→3→10→13 →14→15	

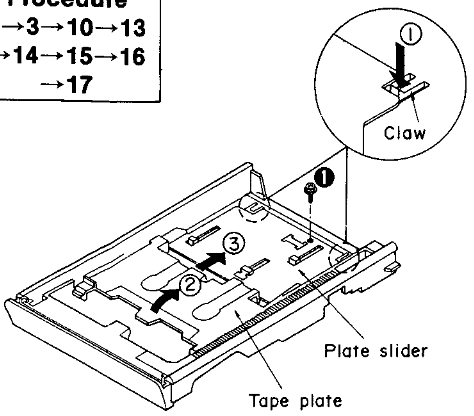

Cassette holder
Loading pulley

1. Turn the loading pulley in the direction of arrow, and slide the cassette holder in front.


Cassette holder

2. Move the cassette holder fully in the dirction of arrow.

Ref. No. 17	Removal of the tape plate and plate slider
Procedure 1→3→10→13 →14→15→16 →17	


①
Claw
❶
③
②
Plate slider
Tape plate

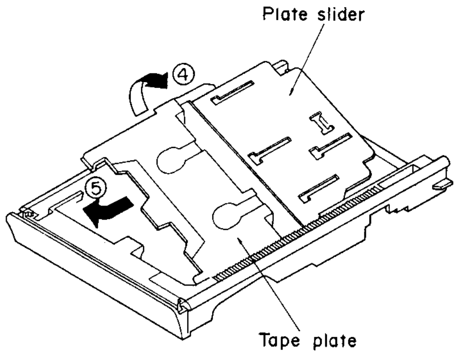


Plate slider
④
⑤
Tape plate

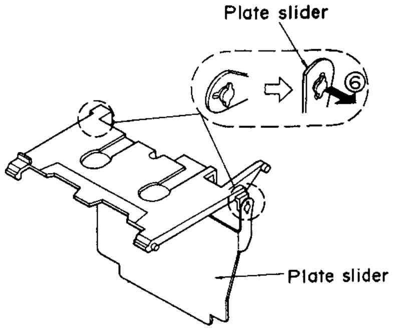


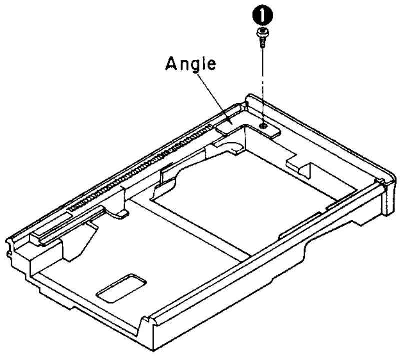
Plate slider
⑥
Plate slider

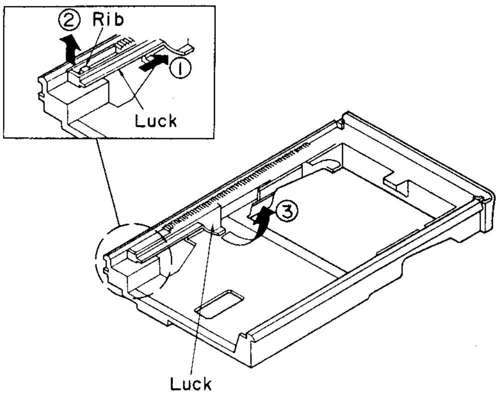
1. Remove the 1 screw (❶).
2. Push the 1 craw in the direction of arrow ①.
3. Lift the tape plate in the direction of arrow ②, and slide it in the direction of arrow ③.
4. Remove the tape plate and plate slider in the direction of arrow ④, ⑤.
5. Extend and remove the plate slider in the direction of arrow ⑥.

Ref. No.
18

Removal of the luck

Procedure
1→3→10→13
→15→16→17
→18



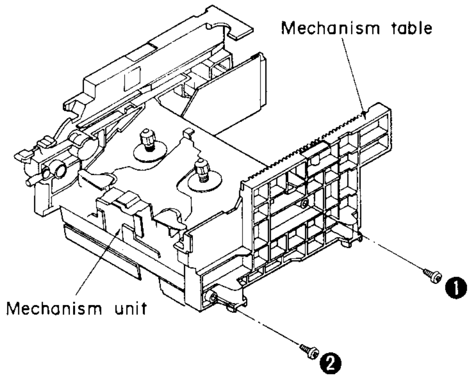

② Rib
①
Luck
③
Luck

1. Remove the 1 screw (❶).
2. Remove the angle.
3. Slide the luck in the direction of arrow ①.
4. Lift the lever in the direction of arrow ②, and remove it from rib.
5. Remove the luck in the direction of arrow ③.

Ref. No.
19

Removal of the mechanism table

Procedure
1→3→10→13
→14→15→19

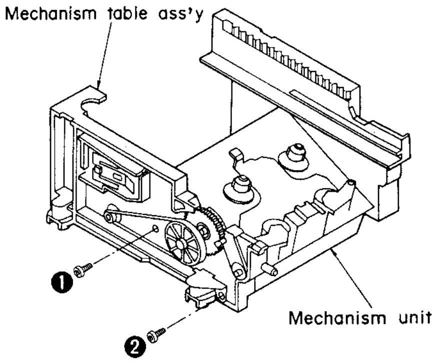

Mechanism table
Mechanism unit
❶
❷

- Remove the 2 screws (❶, ❷).

Ref. No.
20

Removal of the mechanism table ass'y

Procedure
1→3→10→13
→14→15→20


Mechanism table ass'y
❶
❷
Mechanism unit

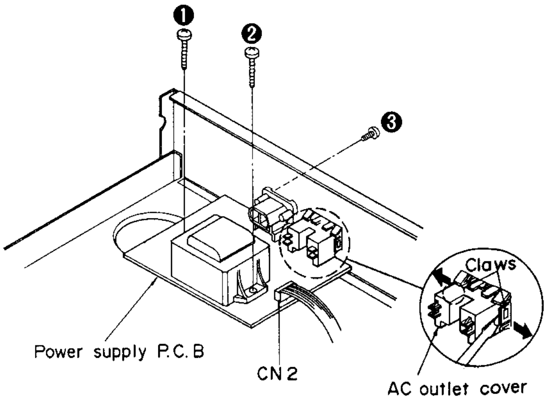
- Remove the 2 screws (❶, ❷).

Ref. No.
21

Removal of the power supply P.C.B.

Procedure
1→21

1. Remove the 1 flat cable of connector (CN2).
2. Remove the 3 screws (❶~❸).
3. Release the 2 claws of the AC outlet cover.


❶
❷
❸
Claws
Power supply P.C.B
CN2
AC outlet cover

■ MEASUREMENTS AND ADJUSTMENTS

Measurement Condition

- Rec. level control; Maximum
- Recording-balance control; Center
- Reverse-mode selector switch; ⇄
- Dolby NR switch; Off
- Make sure heads are clean
- Make sure capstan and pressure roller are clean
- Judgeable room temperature 20±5℃ (68±9° F)

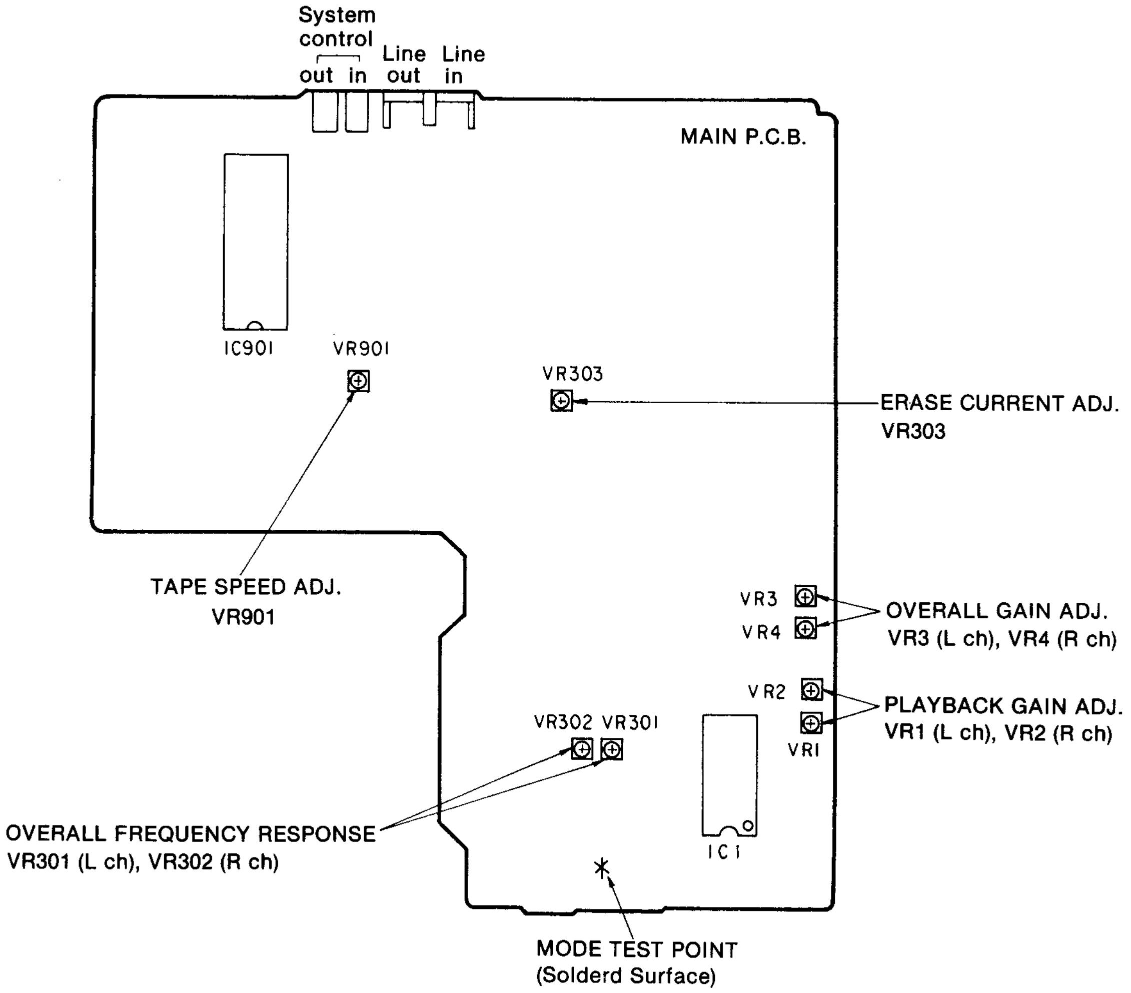
Measuring Instrument

- EVM (Electronic Voltmeter)
- Oscilloscope
- Digital frequency counter
- AF oscillator
- ATT (Attenuator)
- Resistor (600Ω)

Test tape

- Head azimuth adjustment (8kHz, −20dB); QZZCFM
- Tape speed adjustment (3kHz, −10dB); QZZCWAT
- Playback frequency response (315Hz, 12.5kHz, 10kHz, 8kHz, 4kHz, 1kHz, 250Hz, 125Hz, 63Hz, −20dB); QZZCFM
- Playback gain adjustment (315Hz, 0dB); QZZCFM
- Overall frequency response, Overall gain adjustment
  Normal reference blank tape ; QZZCRA
  CrO₂ reference blank tape; QZZCRX
  Metal reference blank tape; QZZCRZ

• Adjustment Points


System control
out
in
Line out
Line in
MAIN P.C.B.
IC901
VR901
VR303
ERASE CURRENT ADJ.
VR303
TAPE SPEED ADJ.
VR901
VR3
VR4
OVERALL GAIN ADJ.
VR3 (L ch), VR4 (R ch)
VR2
VR1
PLAYBACK GAIN ADJ.
VR1 (L ch), VR2 (R ch)
VR302 VR301
OVERALL FREQUENCY RESPONSE
VR301 (L ch), VR302 (R ch)
IC1
MODE TEST POINT
(Solderd Surface)

HEAD AZIMUTH ADJUSTMENT (DECK 1/2)

1. Playback the azimuth adjustment portion (8kHz, −20dB) of the test tape (QZZCFM). Vary the azimuth adjusting screw until the output of the R-CH are maximized.
2. Perform the same adjustment in the play mode.
3. After the adjustment, apply screwlock to the azimuth adjusting screw.

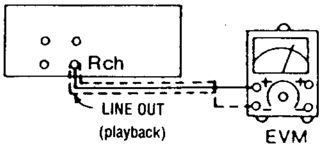

Rch
LINE OUT
(playback)
EVM

Fig. 1

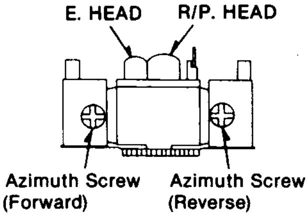

E. HEAD
R/P. HEAD
Azimuth Screw
(Forward)
Azimuth Screw
(Reverse)

Fig. 2

TAPE SPEED ADJUSTMENT

1. Playback the middle portion of the test tape (QZZCWAT).
2. Adjust the **VR901** so that the output is within the standard value.

Standard value: 3000 ± 15Hz

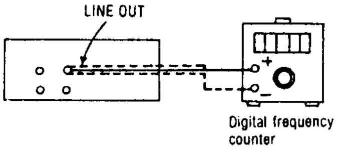

LINE OUT
Digital frequency
counter

Fig.3

PLAYBACK GAIN ADJUSTMENT

1. Playback the gain adjusted portion (315 Hz, 0 dB) of the test tape (QZZCFM).
2. Adjust **VR1** (L-CH) and **VR2** (R-CH) so that the output is within the standard value.

Standard value: 0.4V±0.5dB

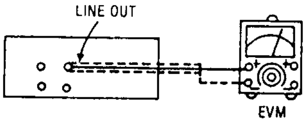

LINE OUT
EVM

Fig.4

PLAYBACK FREQUENCY RESPONSE

1. Playback the frequency response portion (315 Hz, 12.5 kHz ~ 63 Hz, -20 dB) of the test tape (QZZCFM).
2. Assure that the frequency response is within the range shown in **Fig. 6** for both L-CH and R-CH.

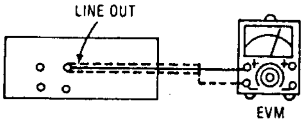

LINE OUT
EVM

Fig.5

Playback frequency response chart

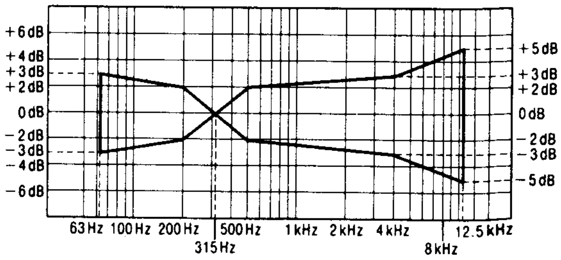


Fig.6

OVERALL GAIN ADJUSTMENT

1. Insert the Normal blank test tape (QZZCRA) and set the unit to the Record pause mode.
2. Apply a reference input signal (1 kHz, -24 dB). Attenuate the output so that its level becomes **0.4V.**
3. Record this input signal.
4. Playback the signal recorded in step 3 above , and assure that the output is within the standard value.
5. If it is not within the standard value, adjust **VR3** (L-CH) and **VR4** (R-CH).
6. Repeat the step 2 ~ 5 above until the output is within the standard value.

Standard value: 0.4V ± 0.5dB

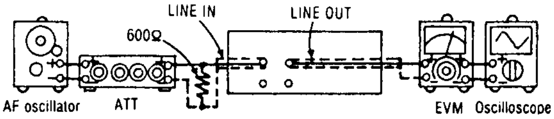


Fig.7

OVERALL FREQUENCY RESPONSE

1. Insert the a Normal blank test tape (QZZCRA) and set the unit to the Record Pause mode.
2. Apply a reference input signal (1 kHz, -24 dB) through an attenuator.
3. Attenuate the signal by 20 dB and adjust the frequency from 50 Hz ~ 10.0kHz.
4. Record the frequency sweep.
5. Playback the recorded signal and assure that it is within the range shown in **Fig.8** in comparison to the reference frequency (1 kHz).
6. If it is not within the standard range, adjust **VR301** (L-CH) and **VR302** (R-CH) so that the frequency level is within the standard range.
7. Repeat steps 2 ~ 6 above using the CrO2 tape(QZZCRX) and the Metal tape(QZZCRZ) increasing the frequency range to 12.5kHz (50Hz~12.5kHz).
8. Assure that the level is within the range shown in **Fig.9**.

Normal Overall frequency response chart (NR OUT)

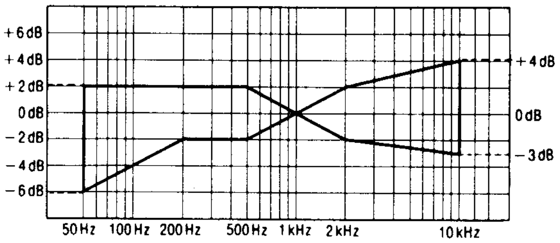
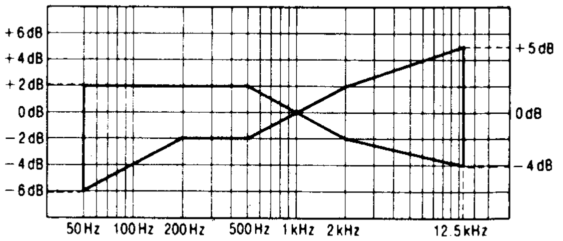


Fig.8

CrO$_2$·Metal Overall frequency response chart (NR OUT)



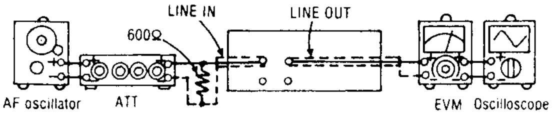


Fig.10

Fig.9

ERASE CURRENT ADJUSTMENT

1. Insert the Metal blank test tape (QZZCRZ) and set the unit to the Record Pause mode.
2. Adjust **VR303** so that the output between **TP3** and GND is within the standard value.

Standard value: 190±5mA (Metal)...EVM Reading: 190±5mV

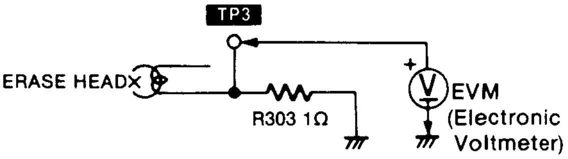


Fig. 11

■ FUNCTIONS OF IC TERMINALS

• IC501 (LC7583A): LCD DRIVE

Pin No.	Mark	I/O	Description
1 ~ 23	S1 ~ S23	O	Serial data indication segment output
24	OPEN	—	Not connected
25 ~ 34	S24 ~ S33	O	Serial data indication segment output
35	S34	O	$\overline{\text{DSP1}}$, $\overline{\text{DSP2}}$ indication segment output
36 ~ 47	AD 1 ~ AD 12	O	ADC (RI, LI) indication segment output
48	AD 13	O	(Not used, open)
49	COM 1	O	Common driver output
50	COM 2		
51	RI	I	AD converter input
52	LI		

Pin No.	Mark	I/O	Description
53	$\overline{\text{DSP 1}}$	I	Direct indication input terminal (Not used, connected to GND)
54	$\overline{\text{DSP 2}}$		
55	VREF	I	Reference voltage input
56	V_{DD}	I	Power supply terminal
57	$\overline{\text{RES}}$	I	Reset signal input
58	TEST 2	O	(Not used, open)
59	V_{SS}	—	GND terminal
60	TEST 1	—	(Not used, connected to GND)
61	OSC	I	Clock signal input
62	CE	I	Chip enable terminal for serial data transfer
63	CL	I	Synchronism clock signal for serial data transfer
64	DI	I	Serial data transfer terminal

• IC901 (M50941-576SP): MICROCOMPUTER

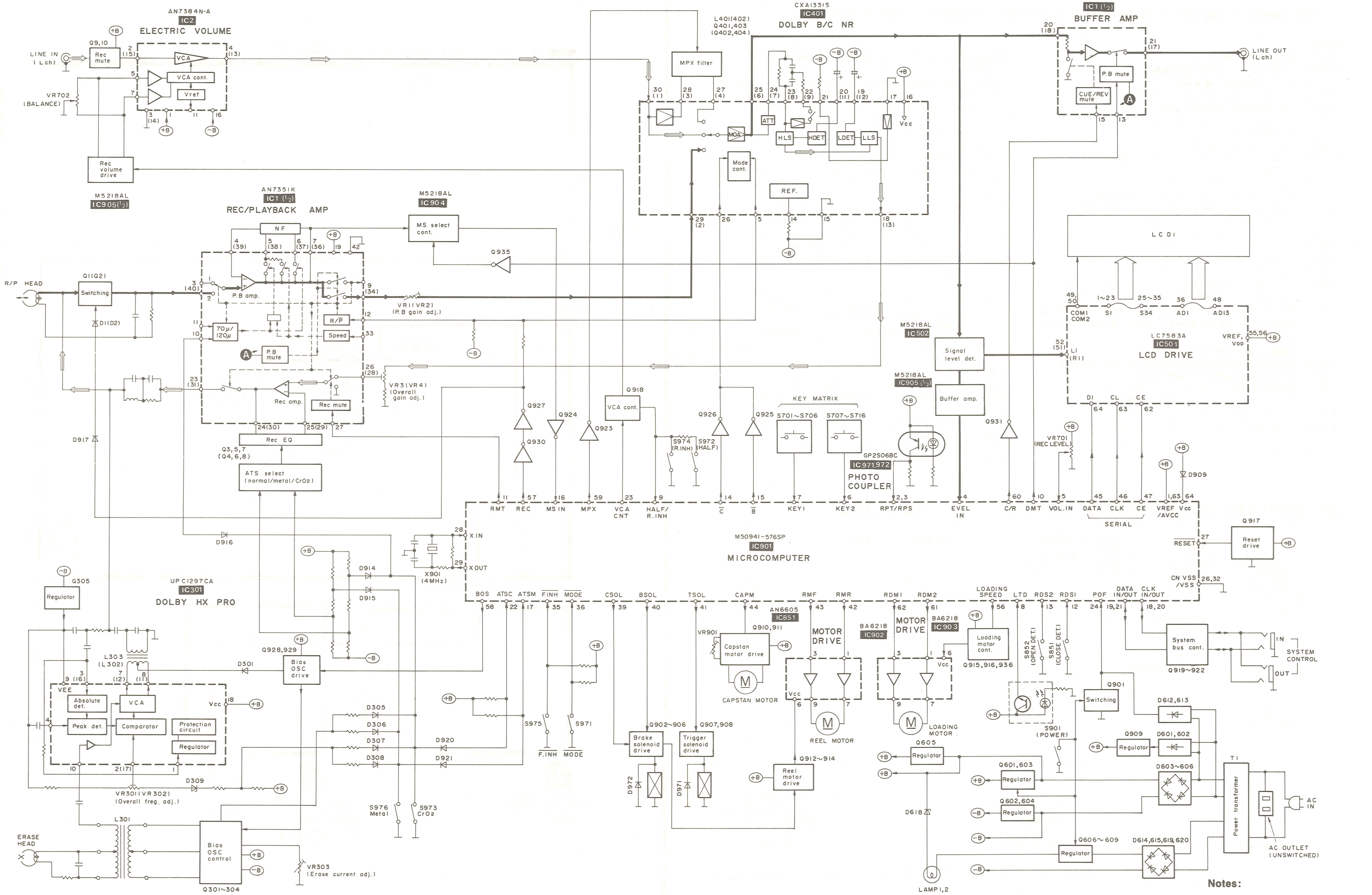
Pin No.	Mark	I/O	Description
1	VREF	I	Reference voltage input
2	RPT	I	Rotary pulse det. signal
3	RPS		
4	EVEL IN	I	Signal level det.
5	VOL IN	I	Volume variable voltage level input
6	KEY 2	I	Key switch input
7	KEY 1		
8	LTD	I	Leader tape det. signal
9	HALF/ R. INH	I	Cassette half det. switch signal/R. rec. inh.
10	DMT	O	Line output muting control terminal ("H": ON, "L": OFF)

Pin No.	Mark	I/O	Description
11	RMT	O	Rec. muting control out put terminal ("H": ON, "L": OFF)
12	RDS 1	I	Disc tray OPEN/CLOSE det. signal
13	RDS 2		
14	$\overline{\text{C}}$	O	Dolby NR mode select output ("L": Dolby C, "H": others)
15	$\overline{\text{B}}$	O	Dolby NR mode select output ("L": Dolby B, "H": others)
16	MSIN	I	Playback select signal output ("L": ON, "H": OFF)
17	ATSM	I	Auto tape select signal input
18	CLK OUT	O	Bass clock signal output
19	DATA OUT	O	Bass data signal output

Pin No.	Mark	I/O	Description
20	CLK IN	I	Bass clock signal input
21	DATA IN	I	Bass data signal input
22	ATSC	I	Auto tape select signal input
23	VCA CNT	O	VCA control signal
24	POF	I	AC POWER det. input
25	$\overline{\text{INT2}}$	—	Not connected
26	CN V_{SS}	—	GND terminal
27	$\overline{\text{RESET}}$	I	Reset signal input
28	X IN	I	Clock oscillator terminal (4 MHz)
29	X OUT	O	
30	XC IN	I	(Not used, connected to GND)
31	XC OUT	O	(Not used, open)
32	V_{SS}	—	GND terminal
33	ϕ	O	System clock signal (Not used, open)
34	R3	—	Not connected
35	$\overline{\text{F. INH}}$	I	F. rec. inh. signal ("H": OFF, "L": ON)
36	$\overline{\text{MODE}}$	I	Mechanism mode switch ("H": OFF, "L": ON)
37	RO	—	Not connected
38	VP	I	Reference voltage ⊖
39	C SOL	O	Brake solenoid keep control signal ("H": ON)
40	B SOL	O	Brake solenoid trigger control signal ("H": ON)

Pin No.	Mark	I/O	Description
41	T SOL	O	Trigger solenoid control signal ("H": ON)
42	RMR	O	Reel motor control
43	RMF		
44	CAPM	O	Capstan motor control ("H": ON, "L": OFF)
45	SER DATA	O	Serial data transfer terminal
46	SER CLK	O	Synchronism clock signal for serial data
47	SER CE	O	Chip enable terminal for serial data transfer
48 ∫ 55	P06 ∫ P00, P27	—	Not connected
56	LOADING SPEED	O	Loading speed control signal
57	REC	O	Rec. mode signal ("H": Rec., "L": Others)
58	BOS	O	Bias oscillator ON/OFF control ("H": ON, "L": OFF)
59	MPX	O	Multiplex ON/OFF control ("L": ON, "H": OFF)
60	C/R	O	Cue/rev mode control ("H": Cue/rev, "L": Others)
61	RDM 2	O	Loading motor drive signal
62	RDM 1		
63	A V_{CC}	I	Power supply terminal
64	V_{CC}	I	Power supply terminal

BLOCK DIAGRAM


AN7384N-A
IC2
ELECTRIC VOLUME
LINE IN (L ch)
Q9,10
Rec mute
VCA
VCA cont.
Vref
VR702 (BALANCE)
Rec volume drive
M5218AL
IC905(½)
L401(402)
Q401,403 (Q402,404)
CXA1331S
IC401
DOLBY B/C NR
MPX filter
MOA
ATT
HLS
HDET
LDET
LLS
Mode cont.
REF.
Vcc
AN7351K
IC1 (½)
BUFFER AMP
P.B mute
CUE/REV mute
LINE OUT (L ch)
AN7351K
IC1 (½)
REC/PLAYBACK AMP
NF
P.B amp.
R/P
Speed
70μ/120μ
P.B mute
Rec amp.
Rec mute
Rec EQ
Q3,5,7 (Q4,6,8)
ATS select (normal/metal/CrO2)
R/P HEAD
Q1(Q2)
Switching
D1(D2)
D917
VR1(VR2) (P.B gain adj.)
VR3(VR4) (Overall gain adj.)
M5218AL
IC904
MS select cont.
Q935
Q918
VCA cont.
Q927
Q930
Q924
Q923
Q926
Q925
S974 (R.INH)
S972 (HALF)
KEY MATRIX
S701~S706
S707~S716
GP2S06BC
IC971,972
PHOTO COUPLER
M5218AL
IC502
Signal level det.
M5218AL
IC905 (½)
Buffer amp.
Q931
VR701 (REC LEVEL)
LCD1
LC7583A
IC501
LCD DRIVE
COM1 COM2
S1
S34
AD1
AD13
L1 (R1)
VREF, VDD
DI
CL
CE
D909
RMT
REC
MS IN
MPX
VCA CNT
HALF/R.INH
C
B
KEY1
KEY2
RPT/RPS
EVEL IN
C/R
DMT
VOL.IN
DATA
CLK
CE
SERIAL
VREF /AVCC
Vcc
M50941-576SP
IC901
MICROCOMPUTER
XIN
XOUT
X901 (4MHz)
RESET
Q917
Reset drive
CN VSS /VSS
D916
D914
D915
BOS
ATSC
ATSM
FINH
MODE
CSOL
BSOL
TSOL
CAPM
RMF
RMR
RDM1
RDM2
LOADING SPEED
LTD
RDS2
RDS1
POF
DATA IN/OUT
CLK IN/OUT
Q305
Regulator
UPC1297CA
IC301
DOLBY HX PRO
L303 (L302)
VEE
Absolute det.
VCA
Peak det.
Comparator
Protection circuit
Regulator
VR301(VR302) (Overall freq. adj.)
D309
D301
Q928,929
Bias OSC drive
D305
D306
D307
D308
D920
D921
S975
S971
F.INH
MODE
S976 Metal
S973 CrO2
ERASE HEAD
L301
Bias OSC control
Q301~304
VR303 (Erase current adj.)
AN6605
IC851
Q910,911
VR901
Capstan motor drive
CAPSTAN MOTOR
Q902~906
Brake solenoid drive
Q907,908
Trigger solenoid drive
D972
D971
MOTOR DRIVE
BA6218
IC902
MOTOR DRIVE
BA6218
IC903
REEL MOTOR
LOADING MOTOR
Q912~914
Reel motor drive
D618
LAMP1,2
Loading motor cont.
Q915,916,936
S852 (OPEN DET.)
S851 (CLOSE DET.)
S901 (POWER)
Q901
Switching
System bus cont.
Q919~922
IN
OUT
SYSTEM CONTROL
Q605
Regulator
Q601,603
Regulator
Q602,604
Regulator
Q606~609
Regulator
Q909
Regulator
D612,613
D601,602
D603~606
D614,615,619,620
T1
Power transformer
AC IN
AC OUTLET (UNSWITCHED)
+B
−B
A

Notes:

- ⟶ Playback signal
- ⟹ Recording signal

■SCHEMATIC DIAGRAM (Parts list on pages 32～35.)

(This schematic diagram may be modified at any time with development of new technology.)

Notes:

- S701 : Stop switch (■ STOP).
- S702 : Fast-forward switch (MS ▶▶).
- S703 : Rewind switch (◀◀ MS).
- S704 : Forward-side playback switch (▶ PLAY).
- S705 : Reverse-side playback switch (◀ PLAY).
- S706 : Cassette tray open/close switch (▲ OPEN/CLOSE).
- S707 : Record switch (● REC).
- S708 : Automatic-record-muting switch (◘ AUTO REC MUTE).
- S709 : Pause switch (▮▮ PAUSE).
- S710 : Auto recording level switch (AUTO LEVEL).
- S711 : Tape counter reset switch (COUNTER RESET).
- S712 : Memory-stop switch (MEMORY STOP).
- S713 : Blank skip switch (BLANK SKIP).
- S714 : Reverse-mode switch (REVERSE MODE; ⇄, ⟲).
- S715 : Dolby noise-reduction switch (Dolby NR; B, C).
- S716 : Multiplex filter switch (MPX).
- S851 : Disc tray close detection switch in "**off**" position.
- S852 : Disc tray open detection switch in "**off**" position.
- S901 : Power switch in "**on**" position (PP area: POWER/ ■ OFF ▬ ON, Others areas: POWER/ ■ standby ⏻ ▬ ON).
- S971 : Mode switch in "**off**" position.
- S972 : Cassette half detection switch in "**off**" position.
- S973 : ATS (CrO_2) switch in "**off**" position.
- S974 : Reverse rec. inhibit switch in "**off**" position.
- S975 : Forward rec. inhibit switch in "**off**" position.
- S976 : ATS (Metal) switch in "**off**" position.
- Resistance are in ohms (Ω), 1/4 watt unless specified otherwise.
  1 K=1,000 (Ω), 1 M=1,000k (Ω)
- Capacity are in micro-farads (μF) unless specified otherwise.
- All voltage values shown in circuitry are under no signal condition and playback mode of deck 2 with volume control at minimum position otherwise specified.
  (　　)......Voltage values at record mode.
  For measurement us EVM.
- Important safety notice
  Components identified by ⚠ mark have special characteristics important for safety. When replacing any of these components, use only manufacturer's specified parts.
- (━━<+B>━━) indicates +B (bias).
- (▬▬<−B>▬▬) indicates −B (bias).
- (⇢) indicates the flow of the playback signal.
- (⇨) indicates the flow of the record signal.
- The supply part number is described alone in the replacement parts list.

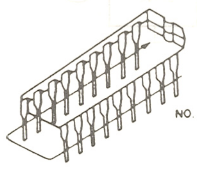
Ref. No.	Production Part No.	Supply Part No.
IC2	AN7384N-A	AN7384
IC502, 904, 905	M5218AL	M5218L

∗ **Caution !**

IC and LSI are sensitive to static electricity.
Secondary trouble can be prevented by taking care during repair.

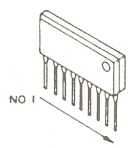
∗Cover the parts boxes made of plastics with aluminum foil.
∗Ground the soldering iron.
∗Put a conductive mat on the work table.
∗Do not touch the legs of IC or LSI with the fingers directly.

■TERMINAL GUIDE OF IC'S, TRANSISTORS AND DIODES

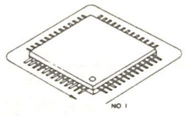


AN6605	8P
AN7384N-A	16P
UPC1297CA	18P
CXA1331S	30P
AN7351K	42P
M50941-576SP	64P

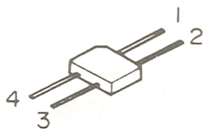
M5218AL	8P
BA6218	9P



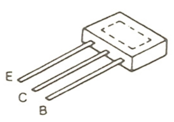
LC7583A	64P



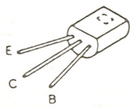
GP2S06BC



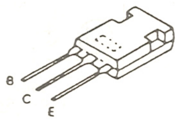
2SA1309AQSTA,
2SC3311AQSTA,
2SB1030RSTTA



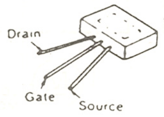
2SB621ARSTA,
2SD592AQRSTA



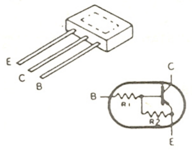
2SB1357EFTA,
2SD2037EFTA



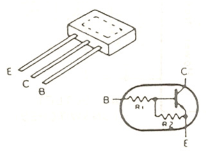
2SJ164PQRTA

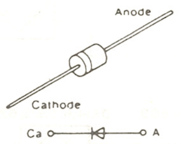

Drain
Gate
Source

DTA114ESTP,
DTA144ESTP

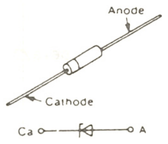

E
C
B
C
B
R1
R2
E

DTC114ESTP,
DTC144ESTP

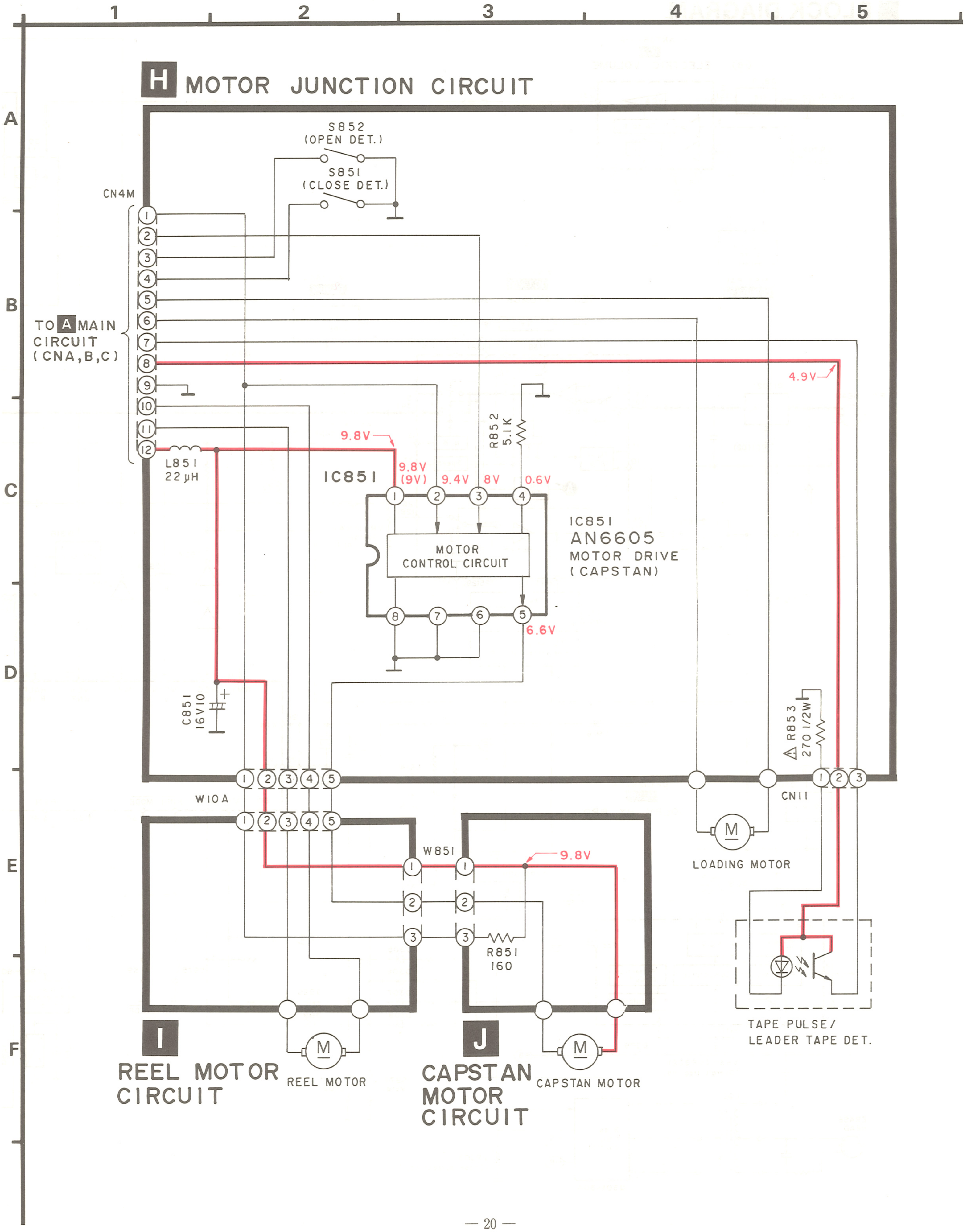

E
C
B
C
B
R1
R2
E

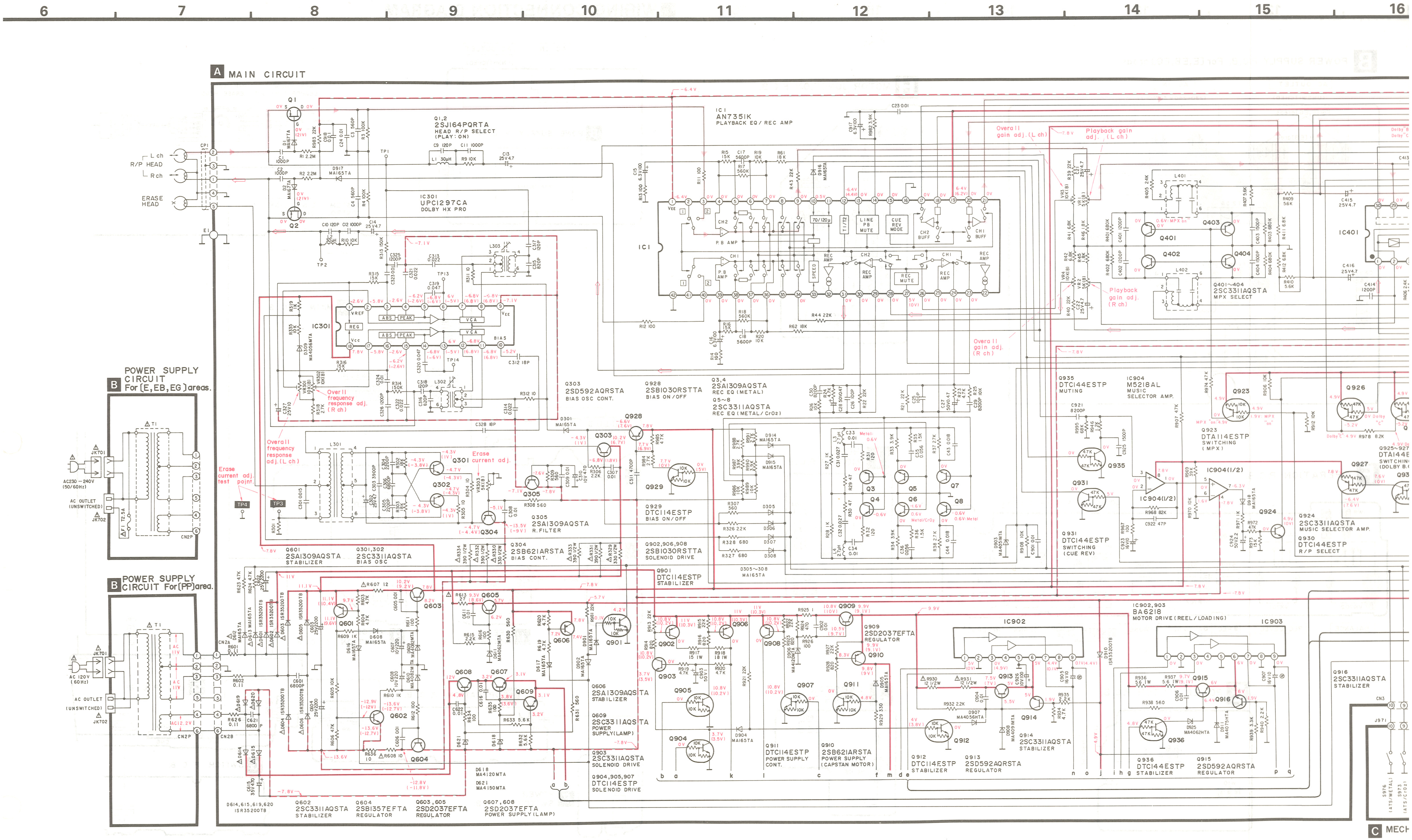

Anode
Cathode
Ca
A

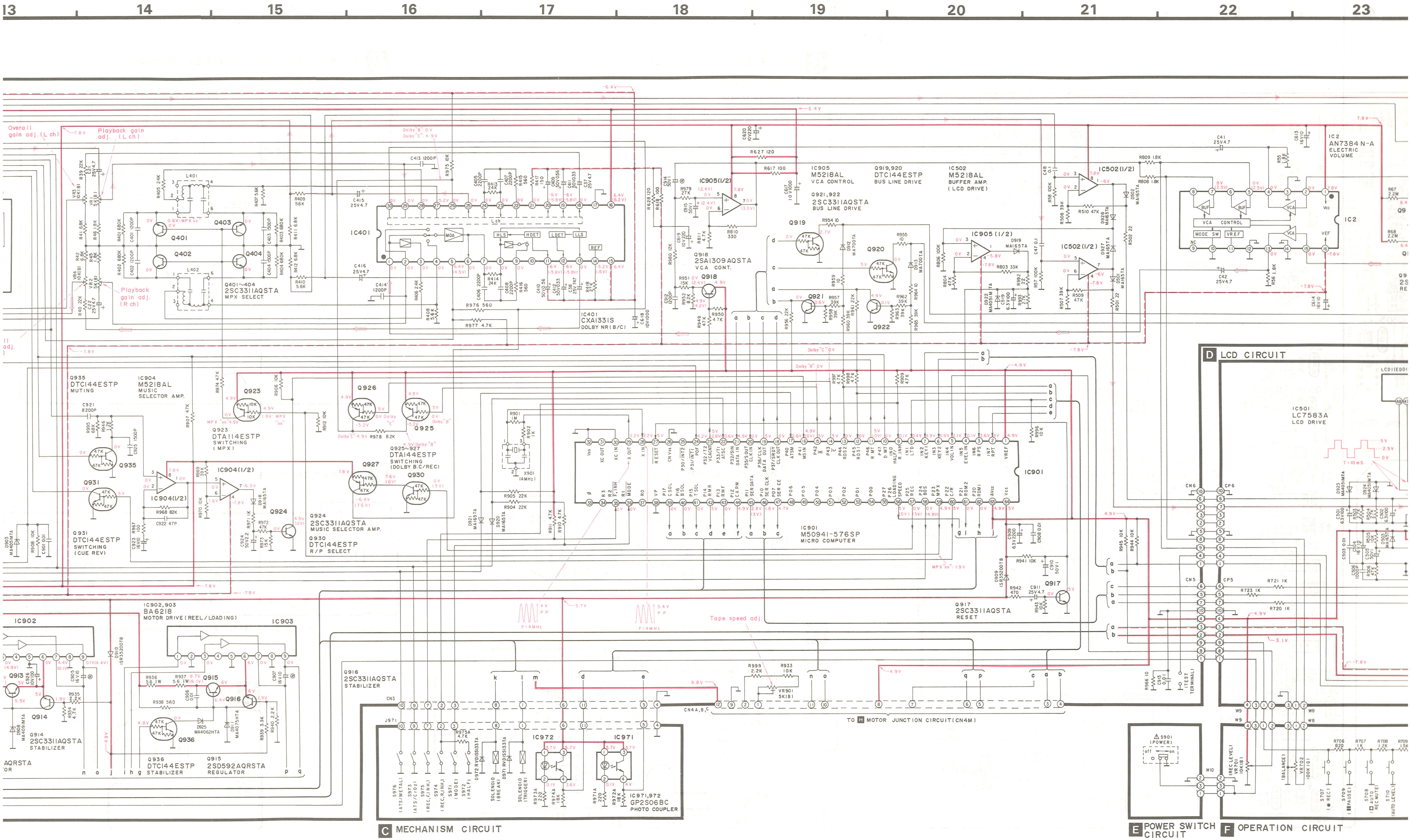
MA167TA,
MA165TA,
1SR35200TB,
MA700TA,
RVD1SS133TA

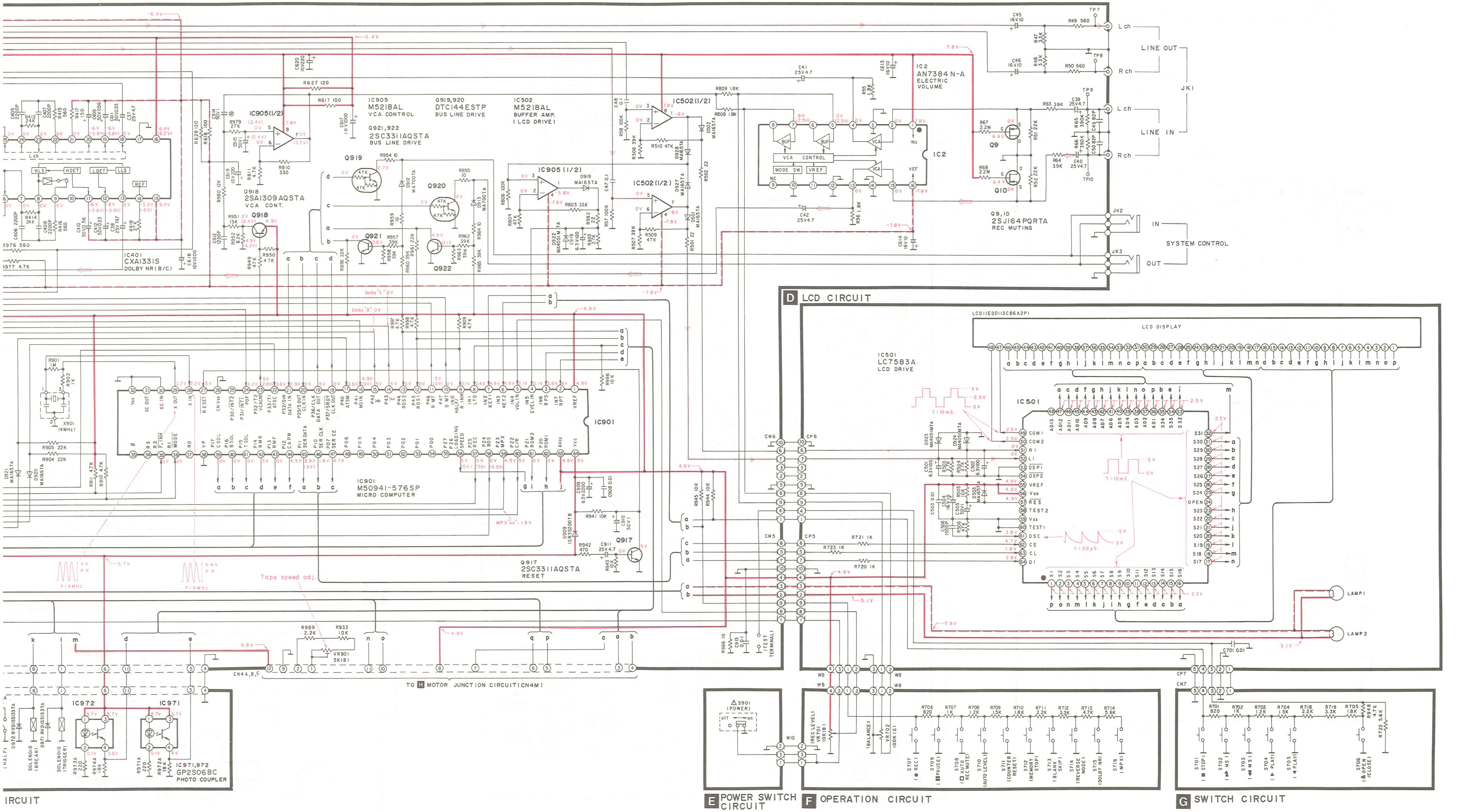

Anode
Cathode
Ca
A

MA4056MTA, MA4056HTA,
MA4082MTA, MA4091MTA,
MA4062MTA, MA4075HTA,
MA4120MTA, MA4062HTA,
MA4051MTA, MA4150MTA


1
2
3
4
5
A
B
C
D
E
F
H MOTOR JUNCTION CIRCUIT
S852
(OPEN DET.)
S851
(CLOSE DET.)
CN4M
TO A MAIN CIRCUIT (CNA,B,C)
1
2
3
4
5
6
7
8
9
10
11
12
4.9V
9.8V
R852
5.1K
L851
22μH
IC851
9.8V
(9V)
9.4V
8V
0.6V
MOTOR CONTROL CIRCUIT
IC851
AN6605
MOTOR DRIVE
(CAPSTAN)
6.6V
C851
16V10
⚠ R853
270 1/2W
W10A
CN11
LOADING MOTOR
W851
9.8V
R851
160
TAPE PULSE/
LEADER TAPE DET.
I
REEL MOTOR CIRCUIT
REEL MOTOR
J
CAPSTAN MOTOR CIRCUIT
CAPSTAN MOTOR

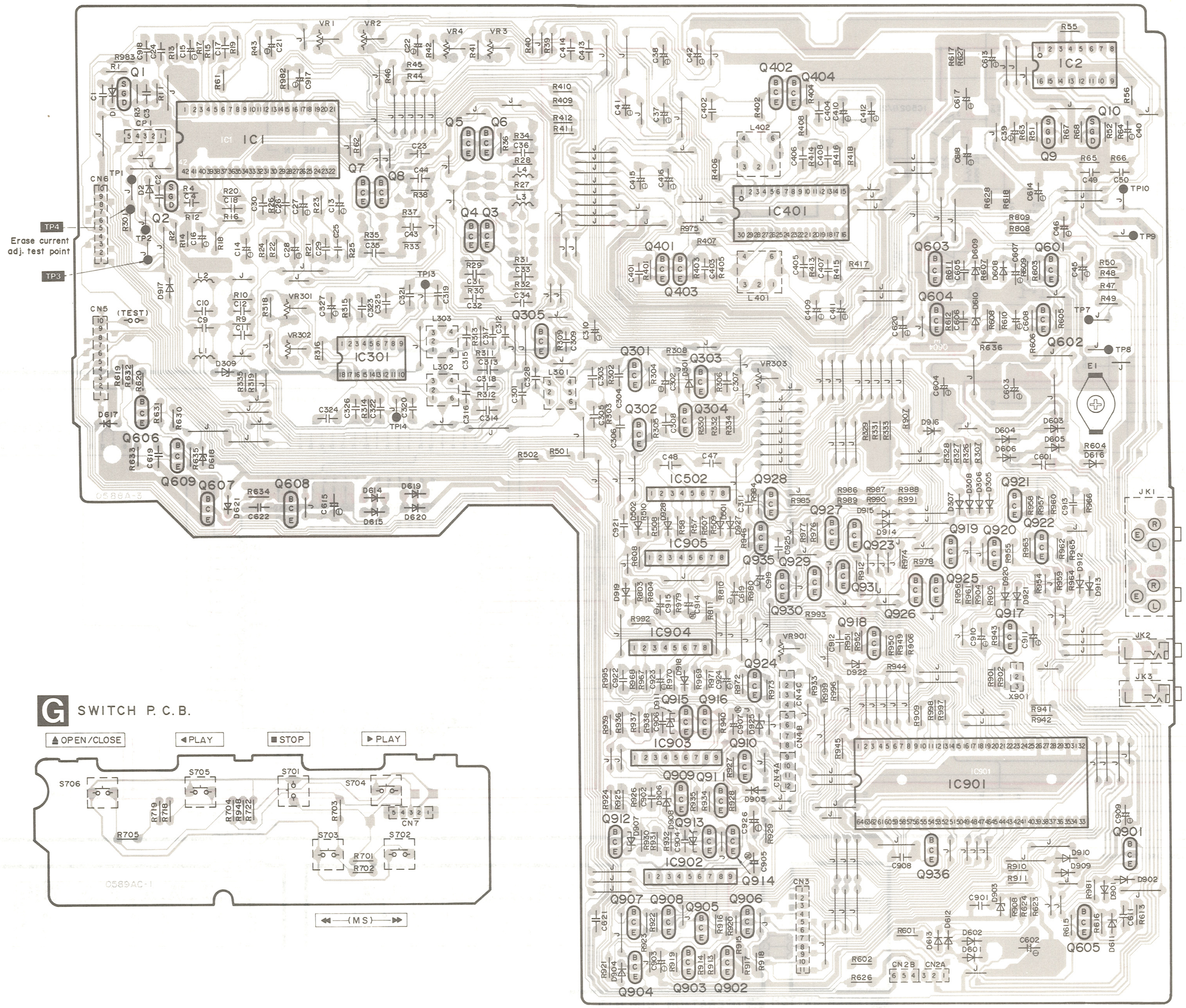

6
7
8
9
10
11
12
13
14
15
16
A MAIN CIRCUIT
B POWER SUPPLY CIRCUIT For (E, EB, EG) areas.
B POWER SUPPLY CIRCUIT For (PP) area.
C MECH
IC1 AN7351K PLAYBACK EQ / REC AMP
IC301 UPC1297CA DOLBY HX PRO
Q1,2 2SJ164PQRTA HEAD R/P SELECT (PLAY: ON)
R/P HEAD L ch R ch
ERASE HEAD
Overall frequency response adj. (R ch)
Overall frequency response adj. (L ch)
Erase current adj.
Erase current adj. test point
Overall gain adj. (L ch)
Overall gain adj. (R ch)
Playback gain adj. (L ch)
Playback gain adj. (R ch)
Q303 2SD592AQRSTA BIAS OSC CONT.
Q928 2SB1030RSTTA BIAS ON/OFF
Q3,4 2SA1309AQTA REC EQ (METAL)
Q5~8 2SC3311AQSTA REC EQ (METAL/CrO2)
Q935 DTC144ESTP MUTING
IC904 M5218AL MUSIC SELECTOR AMP.
Q923 DTA114ESTP SWITCHING (MPX)
Q925~927 DTA144E SWITCHING (DOLBY B.C)
Q401~404 2SC3311AQSTA MPX SELECT
IC401
Q931 DTC144ESTP SWITCHING (CUE REV)
Q924 2SC3311AQSTA MUSIC SELECTOR AMP.
Q930 DTC144ESTP R/P SELECT
Q929 DTC114ESTP BIAS ON/OFF
Q902,906,908 2SB1030RSTTA SOLENOID DRIVE
Q901 DTC114ESTP STABILIZER
D305~308 MA165TA
Q305 2SA1309AQSTA R.FILTER
Q304 2SB621ARSTA BIAS CONT.
Q601 2SA1309AQSTA STABILIZER
Q301,302 2SC3311AQSTA BIAS OSC
Q606 2SA1309AQSTA STABILIZER
Q609 2SC3311AQSTA POWER SUPPLY (LAMP)
Q903 2SC3311AQSTA SOLENOID DRIVE
Q904,905,907 DTC114ESTP SOLENOID DRIVE
D618 MA4120MTA
D621 MA4150MTA
D614,615,619,620 1SR35200TB
Q602 2SC3311AQSTA STABILIZER
Q604 2SB1357EFTA REGULATOR
Q603,605 2SD2037EFTA REGULATOR
Q607,608 2SD2037EFTA POWER SUPPLY (LAMP)
Q909 2SD2037EFTA REGULATOR
Q911 DTC114ESTP POWER SUPPLY CONT.
Q910 2SB621ARSTA POWER SUPPLY (CAPSTAN MOTOR)
IC902
IC902,903 BA6218 MOTOR DRIVE (REEL/LOADING)
IC903
Q912 DTC114ESTP STABILIZER
Q913 2SD592AQRSTA REGULATOR
Q914 2SC3311AQSTA STABILIZER
Q936 DTC144ESTP STABILIZER
Q915 2SD592AQRSTA REGULATOR
Q916 2SC3311AQSTA STABILIZER
AC230 – 240V (50/60Hz)
AC 120V (60Hz)
AC OUTLET (UNSWITCHED)
JK701
JK702
CN2P
CN2A
CN2B
CN3
J971
TP1
TP2
TP3
TP4
TP13
TP14
L301
L303
L401
L402
VR301
VR302
VR303
b a k l c f m d e n o j i h g p q


13
14
15
16
17
18
19
20
21
22
23
Overall gain adj. (L ch)
Playback gain adj. (L ch)
Playback gain adj. (R ch)
L401
L402
Q401
Q402
Q403
Q404
Q401~404
2SC3311AQSTA
MPX SELECT
IC401
IC401
CXA1331S
DOLBY NR (B/C)
IC905 (1/2)
IC905
M5218AL
VCA CONTROL
Q919,920
DTC144ESTP
BUS LINE DRIVE
Q921,922
2SC3311AQSTA
BUS LINE DRIVE
Q918
2SA1309AQSTA
VCA CONT.
Q919
Q920
Q921
Q922
IC502
M5218AL
BUFFER AMP.
(LCD DRIVE)
IC502 (1/2)
IC905 (1/2)
IC2
AN7384N-A
ELECTRIC VOLUME
VCA CONTROL
MODE SW
VREF
Q935
DTC144ESTP
MUTING
IC904
M5218AL
MUSIC SELECTOR AMP.
Q923
DTA114ESTP
SWITCHING
(MPX)
Q926
Q925
Q925~927
DTA144ESTP
SWITCHING
(DOLBY B.C/REC)
Q927
Q930
IC904 (1/2)
Q931
DTC144ESTP
SWITCHING
(CUE REV)
Q924
Q924
2SC3311AQSTA
MUSIC SELECTOR AMP.
Q930
DTC144ESTP
R/P SELECT
X901 (4MHz)
IC901
IC901
M50941-576SP
MICRO COMPUTER
Q917
2SC3311AQSTA
RESET
D LCD CIRCUIT
IC501
LC7583A
LCD DRIVE
T:10mS.
IC902
IC902,903
BA6218
MOTOR DRIVE (REEL/LOADING)
IC903
Q913
Q914
Q914
2SC3311AQSTA
STABILIZER
Q915
Q916
Q936
Q936
DTC144ESTP
STABILIZER
Q915
2SD592AQRSTA
REGULATOR
Q916
2SC3311AQSTA
STABILIZER
Tape speed adj.
VR901 5K(B)
TO H MOTOR JUNCTION CIRCUIT (CN4M)
CN3
J971
CN4A,B,C
IC972
IC971
IC971,972
GP2S06BC
PHOTO COUPLER
S976 (ATS/METAL)
S973 (ATS/CrO2)
S975 (REC,F,INH.)
S974 (REC,R,INH.)
S971 (MODE)
S972 (HALF)
SOLENOID (BREAK)
SOLENOID (TRIGGER)
C MECHANISM CIRCUIT
S901 (POWER)
E POWER SWITCH CIRCUIT
F OPERATION CIRCUIT
VR701 (REC LEVEL)
VR702 (BALANCE)
S707 (● REC)
S709 (❚❚PAUSE)
S708 (AUTO REC MUTE)
S710 (AUTO LEVEL)
CN5
CN6
CP5
CP6
W8
W9
W10


LINE OUT
L ch
R ch
LINE IN
JK1
JK2
JK3
IN
SYSTEM CONTROL
OUT
IC2
AN7384N-A
ELECTRIC VOLUME
Q9,10
2SJ164PQRTA
REC MUTING
IC905
M5218AL
VCA CONTROL
Q919,920
DTC144ESTP
BUS LINE DRIVE
IC502
M5218AL
BUFFER AMP.
(LCD DRIVE)
Q921,922
2SC3311AQSTA
BUS LINE DRIVE
IC905(1/2)
IC905(1/2)
IC502(1/2)
IC502(1/2)
Q918
2SA1309AQSTA
VCA CONT.
IC401
CXA1331S
DOLBY NR(B/C)
IC901
M50941-576SP
MICRO COMPUTER
Q917
2SC3311AQSTA
RESET
X901 (4MHz)
Tape speed adj.
F:4MHz
Dolby "C" 0V
Dolby "B" 0V
MPX "on": 1.9V
D LCD CIRCUIT
LCD1(EDD113CB6A2P)
LCD DISPLAY
IC501
LC7583A
LCD DRIVE
T:10mS
T:20μS
LAMP1
LAMP2
CN4A,B,C
TO H MOTOR JUNCTION CIRCUIT(CN4M)
IC972
IC971
IC971,972
GP2S06BC
PHOTO COUPLER
SOLENOID (BREAK)
SOLENOID (TRIGGER)
IRCUIT
S901 (POWER)
E POWER SWITCH CIRCUIT
VR701 10K(B) (REC LEVEL)
VR702 100K(G) (BALANCE)
S707 (● REC)
S709 (❚❚PAUSE)
S708 (◻ AUTO REC MUTE)
S710 (AUTO LEVEL)
S711 (COUNTER RESET)
S712 (MEMORY STOP)
S713 (BLANK SKIP)
S714 (REVERSE MODE)
S715 (DOLBY NR)
S716 (MPX)
F OPERATION CIRCUIT
S701 (■ STOP)
S702 (▶▶ MS)
S703 (◀◀ MS)
S704 (▶ PLAY)
S705 (◀ PLAY)
S706 (▲OPEN /CLOSE)
G SWITCH CIRCUIT

PRINTED CIRCUIT BOARDS

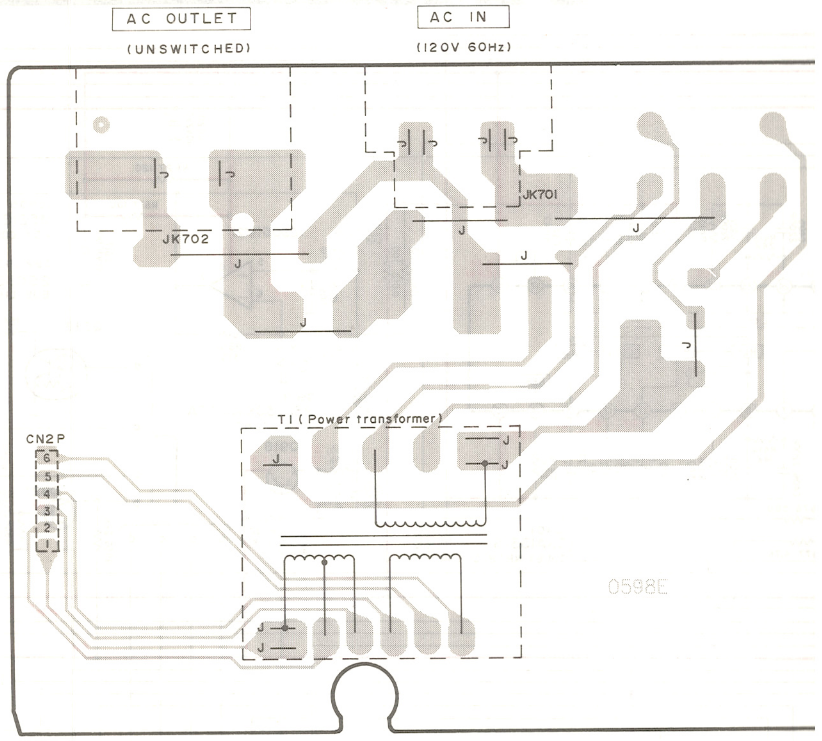
A MAIN P.C.B.


TP4
TP3
Erase current adj. test point
TP1
TP2
CN6
CN5
(TEST)
IC1
IC2
IC301
IC401
IC502
IC901
IC902
IC903
IC904
IC905
VR1
VR2
VR3
VR4
VR301
VR302
VR303
VR901
TP7
TP8
TP9
TP10
TP13
TP14
E1
JK1
LINE IN
LINE OUT
JK2
JK3
(IN)
(OUT)
SYSTEM CONTROL
CN3
CN2B
CN2A
CN4A
CN4B
CN4C
0589A-3

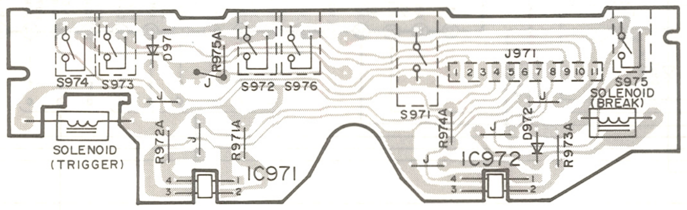
G SWITCH P.C.B.

▲OPEN/CLOSE
◄PLAY
■STOP
►PLAY
S706
S705
S701
S704
S703
S702
CN7
◄◄—(MS)—►►
0589AC-1

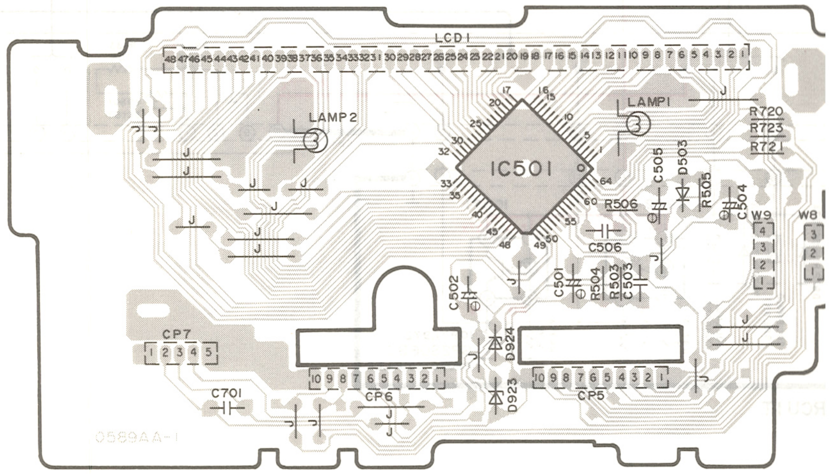
B POWER SUPPLY P.C.B. For [PP] area.

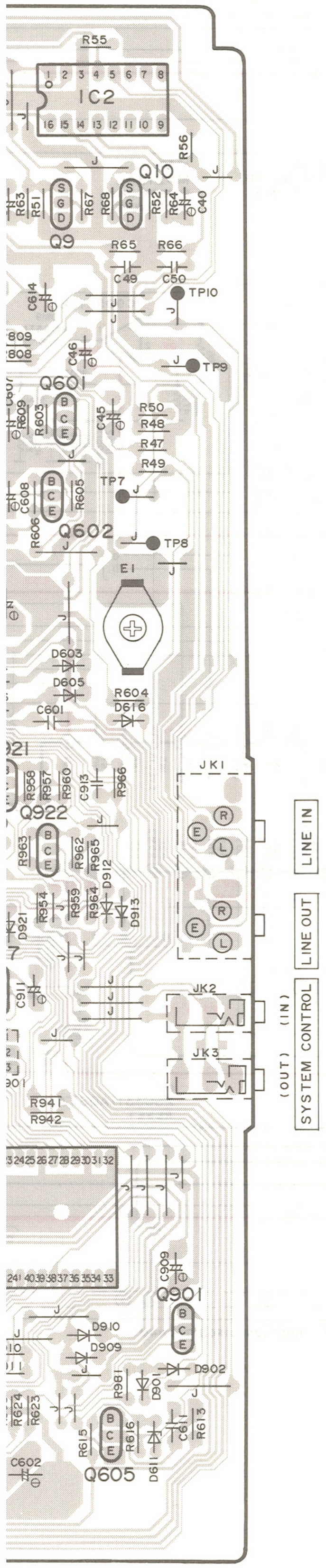

AC OUTLET
(UNSWITCHED)
AC IN
(120V 60Hz)
JK701
JK702
T1 (Power transformer)
CN2P
0598E

C MECHANISM P.C.B.

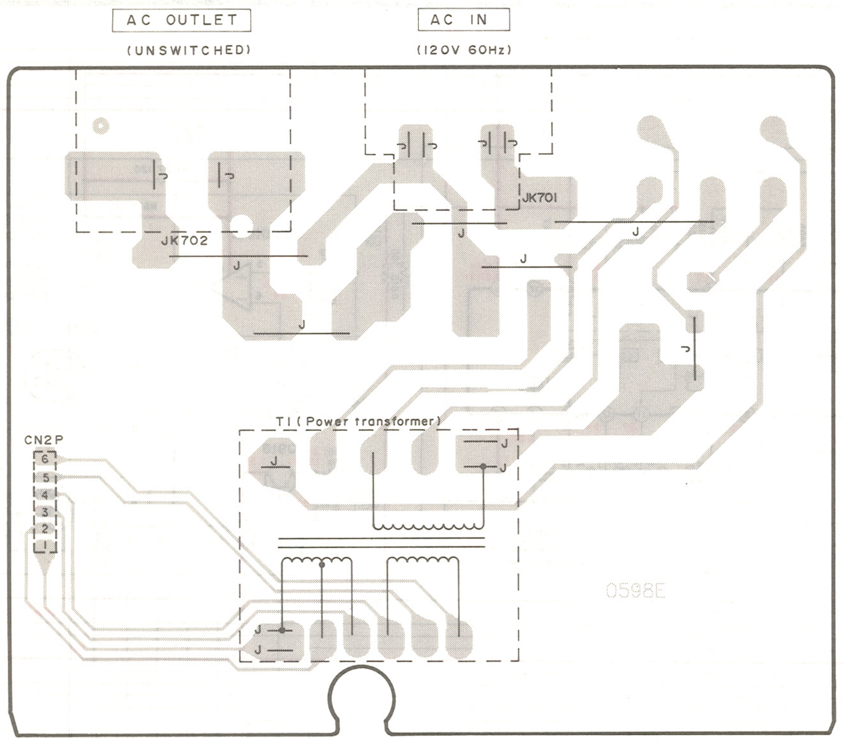

S974
S973
S972
S976
S971
S975
SOLENOID (BREAK)
SOLENOID (TRIGGER)
J971
IC971
IC972

D LCD P.C.B.

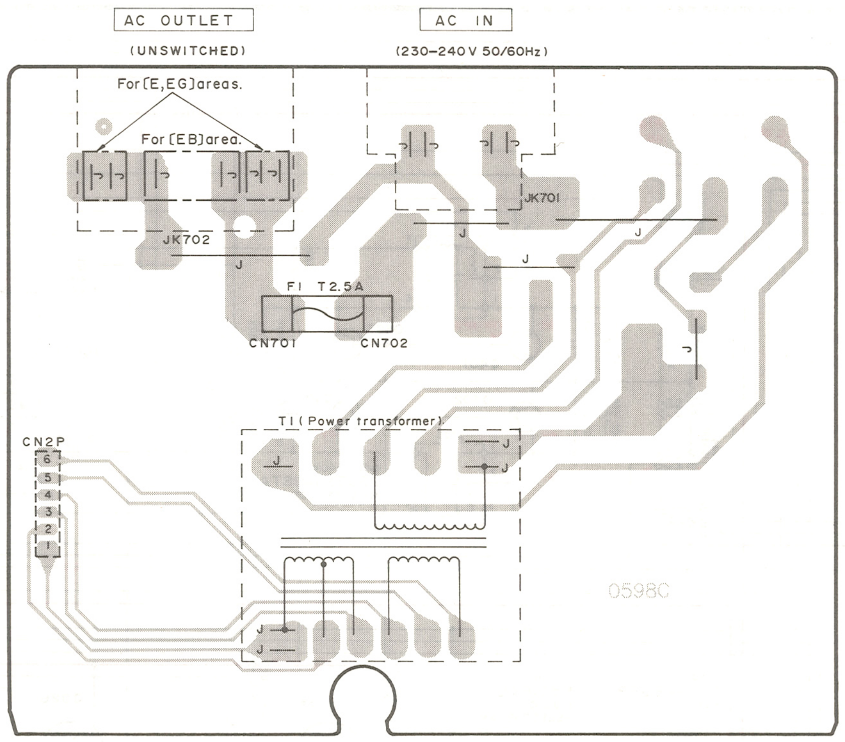

LCD1
LAMP1
LAMP2
IC501
CP7
CP6
CP5
C701
W8
W9
0589AA-1


R55
IC2
Q10
R56
R63
R51
R67
R68
R52
R64
C40
Q9
R65
R66
C49
C50
TP10
TP9
Q601
R50
R48
R47
R49
C45
TP7
R605
C608
Q602
TP8
E1
D603
D605
R604
D616
C601
JK1
LINE IN
LINE OUT
Q922
R963
R962
R965
D912
D913
R954
R959
R964
D921
JK2
JK3
(IN)
(OUT)
SYSTEM CONTROL
R941
R942
Q901
D910
D909
D902
R981
D901
R624
R623
R615
R616
C611
R613
C602
Q605
D611

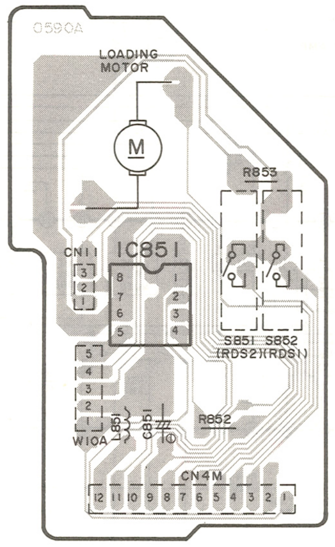
B POWER SUPPLY P.C.B. For [PP] area.


AC OUTLET
(UNSWITCHED)
AC IN
(120V 60Hz)
JK702
JK701
T1 (Power transformer)
CN2P
0598E

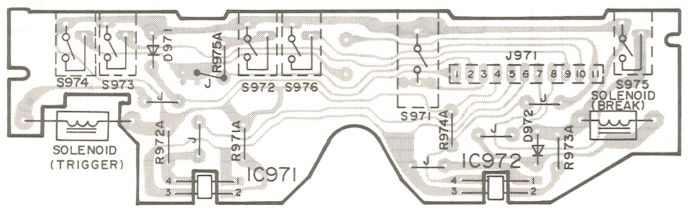
B POWER SUPPLY P.C.B. For [E, EB, EG] areas.


AC OUTLET
(UNSWITCHED)
AC IN
(230–240V 50/60Hz)
For [E, EG] areas.
For [EB] area.
JK702
JK701
F1 T2.5A
CN701
CN702
T1 (Power transformer)
CN2P
0598C

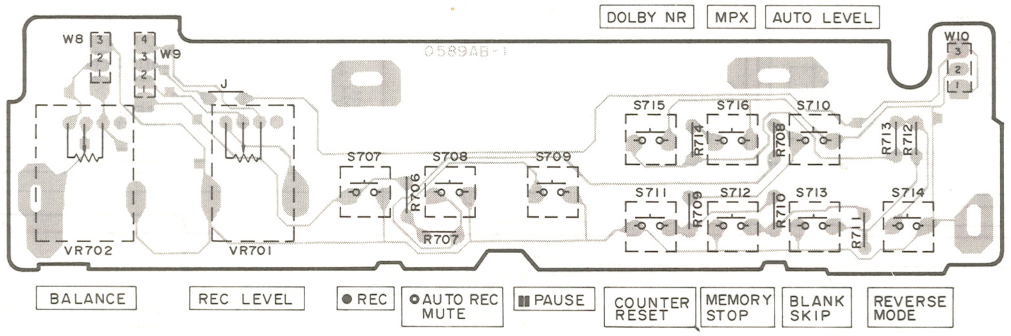
H MOTOR JUNCTION P.C.B.


0590A
LOADING MOTOR
M
R853
CN11
IC851
S851
S852
(RDS2)
(RDS1)
W10A
L851
C851
R852
CN4M

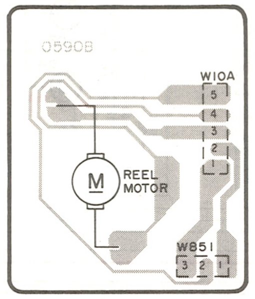
C MECHANISM P.C.B.


S974
S973
D971
R975A
S972
S976
J971
S971
S975
SOLENOID (BREAK)
SOLENOID (TRIGGER)
R972A
R971A
IC971
R974A
D972
R973A
IC972

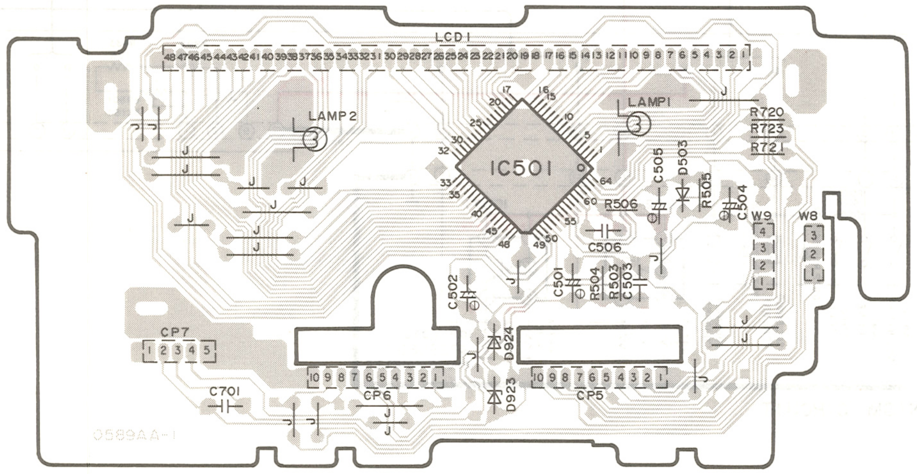
F OPERATION P.C.B.


DOLBY NR
MPX
AUTO LEVEL
W8
W9
W10
0589AB-1
S715
S716
S710
R714
R708
R713
R712
S707
S708
S709
R706
R707
S711
S712
S713
S714
R709
R710
R711
VR702
VR701
BALANCE
REC LEVEL
● REC
○ AUTO REC MUTE
■ PAUSE
COUNTER RESET
MEMORY STOP
BLANK SKIP
REVERSE MODE

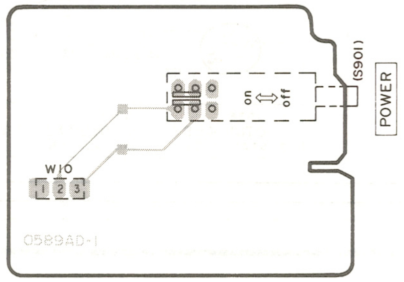
I REEL MOTOR P.C.B.


0590B
W10A
M
REEL MOTOR
W851

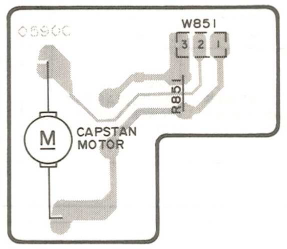
D LCD P.C.B.


LCD1
LAMP2
LAMP1
IC501
R720
R723
R721
R506
C505
D503
R505
C504
C506
W8
C502
C501
R504
R503
C503
D924
D923
CP7
C701
CP6
CP5
0589AA-1

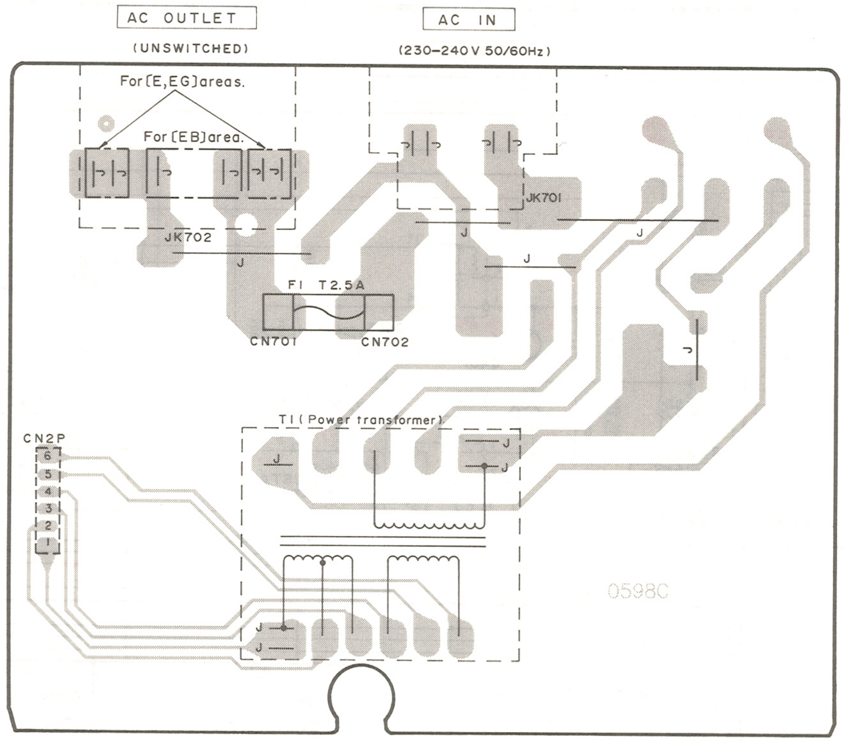
E POWER SWITCH P.C.B.


on ⇔ off
(S901)
POWER
W10
0589AC-1

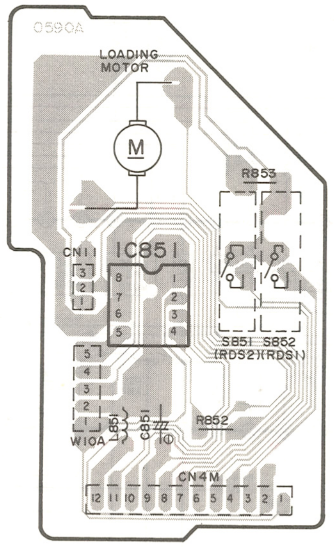
J CAPSTAN MOTOR P.C.B.


0590C
W851
R851
M
CAPSTAN MOTOR

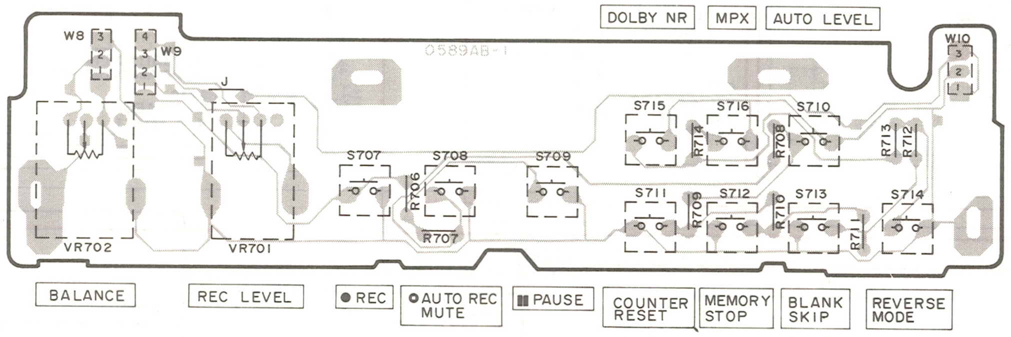
B POWER SUPPLY P.C.B. For [E,EB,EG] areas.


AC OUTLET
(UNSWITCHED)
AC IN
(230–240V 50/60Hz)
For [E,EG] areas.
For [EB] area.
JK702
JK701
F1 T2.5A
CN701
CN702
CN2P
T1 (Power transformer)
J
0598C

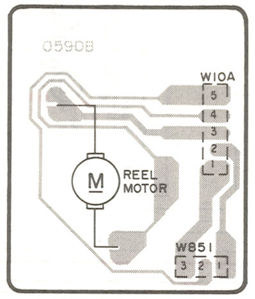
H MOTOR JUNCTION P.C.B.


0590A
LOADING MOTOR
M
R853
IC851
CN11
S851 S852
(RDS2)(RDS1)
R852
W10A
L851
C851
CN4M
12 11 10 9 8 7 6 5 4 3 2 1

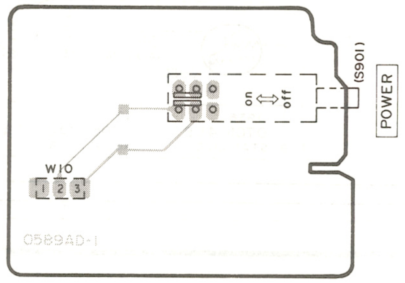
F OPERATION P.C.B.


DOLBY NR
MPX
AUTO LEVEL
W8
W9
W10
0589AB-1
S715
S716
S710
S707
S708
S709
S711
S712
S713
S714
R714
R708
R713
R712
R706
R707
R709
R710
R711
VR702
VR701
BALANCE
REC LEVEL
● REC
○ AUTO REC MUTE
■ PAUSE
COUNTER RESET
MEMORY STOP
BLANK SKIP
REVERSE MODE

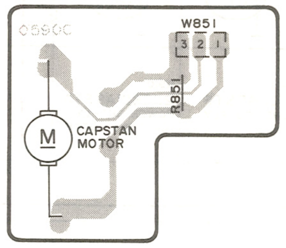
I REEL MOTOR P.C.B.


0590B
W10A
M
REEL MOTOR
W851

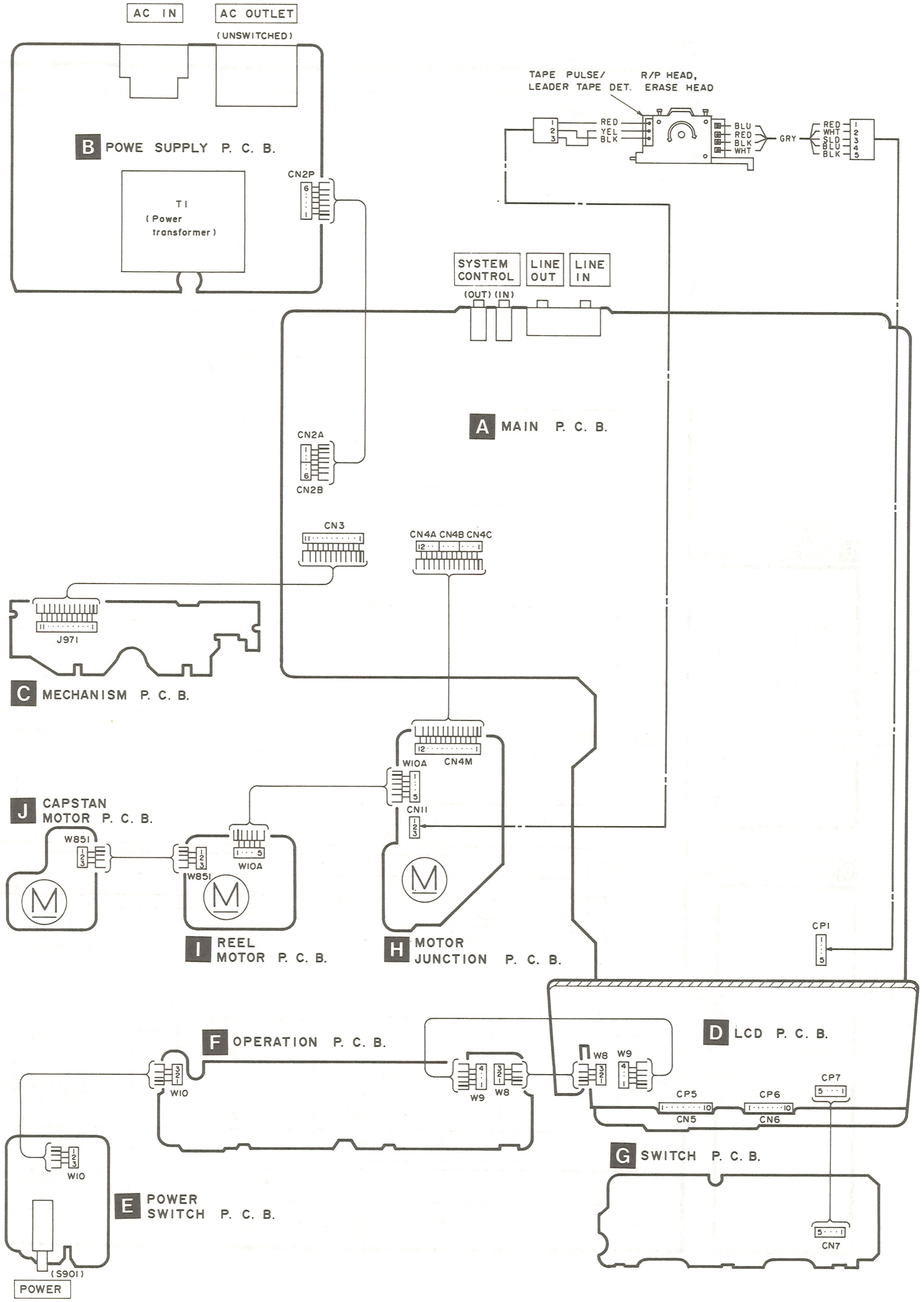
E POWER SWITCH P.C.B.


on ⇔ off
(S901)
POWER
W10
1 2 3
0589AD-1

J CAPSTAN MOTOR P.C.B.

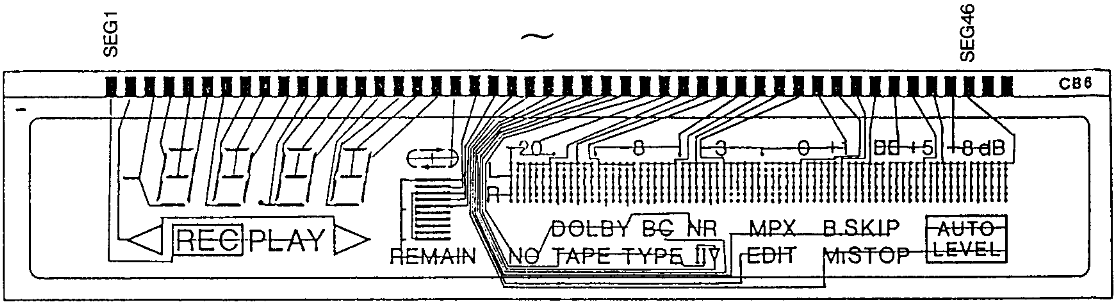

0590C
W851
R851
M
CAPSTAN MOTOR

WIRING CONNECTION DIAGRAM

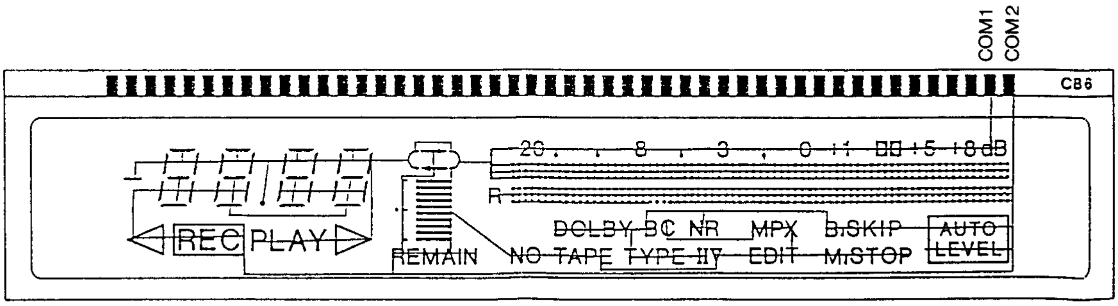

AC IN
AC OUTLET
(UNSWITCHED)
B POWE SUPPLY P. C. B.
T1 (Power transformer)
CN2P
TAPE PULSE/ LEADER TAPE DET.
R/P HEAD, ERASE HEAD
RED
YEL
BLK
BLU
RED
BLK
WHT
GRY
RED
WHT
SLD
BLU
BLK
SYSTEM CONTROL
(OUT) (IN)
LINE OUT
LINE IN
A MAIN P. C. B.
CN2A
CN2B
CN3
CN4A CN4B CN4C
J971
C MECHANISM P. C. B.
W10A
CN4M
CN11
J CAPSTAN MOTOR P. C. B.
W851
M
I REEL MOTOR P. C. B.
H MOTOR JUNCTION P. C. B.
CP1
F OPERATION P. C. B.
W10
W9
W8
D LCD P. C. B.
CP5
CN5
CP6
CN6
CP7
G SWITCH P. C. B.
CN7
E POWER SWITCH P. C. B.
(S901)
POWER

■ INTERNAL CONNECTIONS OF LCD

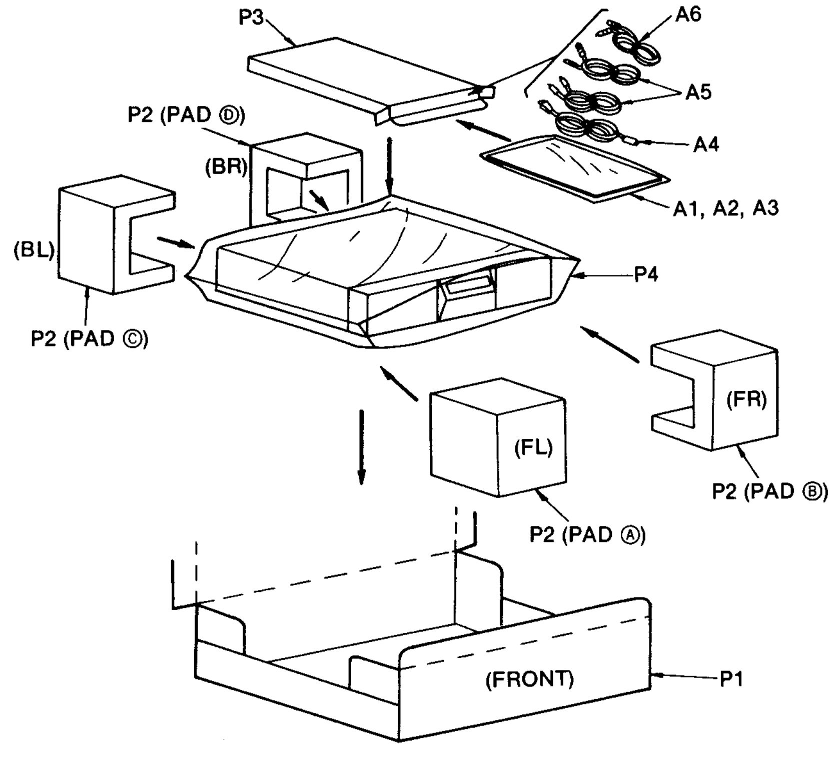
- **Segment connection diagram**


SEG1
~
SEG46
CB6
20
8
3
0
+1
+5
+8dB
L
R
REC
PLAY
REMAIN
DOLBY BC NR
MPX
B.SKIP
AUTO
LEVEL
NO TAPE
TYPE II
EDIT
M.STOP

- **Common connection diagram**


COM1
COM2
CB6
20
8
3
0
+1
+5
+8dB
R
REC
PLAY
REMAIN
DOLBY BC NR
MPX
B.SKIP
AUTO
LEVEL
NO TAPE
TYPE II
EDIT
M.STOP

■ PACKING


P3
A6
A5
A4
A1, A2, A3
P2 (PAD Ⓓ)
(BR)
(BL)
P4
P2 (PAD Ⓒ)
(FR)
(FL)
P2 (PAD Ⓑ)
P2 (PAD Ⓐ)
(FRONT)
P1

<PAD Ⓐ, Ⓑ, Ⓒ, Ⓓ Part No.: RPN0436>

■ REPLACEMENT PARTS LIST

Notes : * Important safety notice:
Components identified by ⚠ mark have special characteristics important for safety. When replacing any of these components use only manufacturer's specified parts.
* The parenthesized indications in the Remarks columns specify the areas. (Refer to the cover page for area.) Parts without these indications can be used for all areas.

Ref. No.	Part No.	Part Name & Description	Remarks
		INTEGRATED CIRCUIT(S)	
IC1	AN7351K	PLAYBACK EQ/REC AMP	
IC2	AN7384	ELECTRIC VOLUME	
IC301	UPC1297CA	DOLBY HX PRO	
IC401	CXA1331S	DOLBY NR(B/C)	
IC501	LC7583A	LCD DRIVE	
IC502	M5218L	BUFFER AMP(LCD DRIVE)	
IC851	AN6605	MOTOR DRIVE(CAPSTAN)	
IC901	M50941-576SP	MICRO COMPUTER	
IC902, 903	BA6218	MOTOR DRIVE(REEL/LOADING)	
IC904	M5218L	MUSIC SELECTOR AMP	
IC905	M5218L	VCA CONTROL	
IC971, 972	GP2S06BC	PHOTO COUPLER	
		TRANSISTOR(S)	
Q1, 2	2SJ164PQRTA	TRANSISTOR	
Q3, 4	2SA1309A-R	TRANSISTOR	
Q5-8	2SC3311A-Q	TRANSISTOR	
Q9	2SJ164PQRTA	TRANSISTOR	
Q10	2SJ164PQRTA	TRANSISTOR	
Q301, 302	2SC3311A-Q	TRANSISTOR	
Q303	2SD592ANCQ	TRANSISTOR	
Q304	2SB621A-R	TRANSISTOR	
Q305	2SA1309A-R	TRANSISTOR	
Q401-404	2SC3311A-Q	TRANSISTOR	
Q601	2SA1309A-R	TRANSISTOR	
Q602	2SC3311A-Q	TRANSISTOR	
Q603	2SD2037EFTA	TRANSISTOR	
Q604	2SB1357EFTA	TRANSISTOR	
Q605	2SD2037EFTA	TRANSISTOR	
Q606	2SA1309A-R	TRANSISTOR	
Q607, 608	2SD2037EFTA	TRANSISTOR	
Q609	2SC3311A-Q	TRANSISTOR	
Q901	DTC114ESTP	TRANSISTOR	
Q902	2SB1030QTA	TRANSISTOR	
Q903	2SC3311A-Q	TRANSISTOR	
Q904, 905	DTC114ESTP	TRANSISTOR	
Q906	2SB1030QTA	TRANSISTOR	
Q907	DTC114ESTP	TRANSISTOR	
Q908	2SB1030QTA	TRANSISTOR	
Q909	2SD2037EFTA	TRANSISTOR	
Q910	2SB621A-R	TRANSISTOR	
Q911, 912	DTC114ESTP	TRANSISTOR	
Q913	2SD592ANCQ	TRANSISTOR	
Q914	2SC3311A-Q	TRANSISTOR	
Q915	2SD592ANCQ	TRANSISTOR	
Q916, 917	2SC3311A-Q	TRANSISTOR	
Q918	2SA1309A-R	TRANSISTOR	
Q919, 920	DTC144ESTP	TRANSISTOR	
Q921, 922	2SC3311A-Q	TRANSISTOR	
Q923	DTA114ESTP	TRANSISTOR	
Q924	2SC3311A-Q	TRANSISTOR	
Q925-927	DTA144ESTP	TRANSISTOR	
Q928	2SB1030QTA	TRANSISTOR	
Q929	DTC114ESTP	TRANSISTOR	
Q930, 931	DTC144ESTP	TRANSISTOR	
Q935, 936	DTC144ESTP	TRANSISTOR	
		DIODE(S)	
D1, 2	MA167	DIODE	
D301	MA165	DIODE	
D305-308	MA165	DIODE	
D309	MA4056MTA	DIODE	
D501-503	MA165	DIODE	
D601-606	1SR35200TB	DIODE	⚠
D608	MA165	DIODE	
D609, 610	MA4082MTA	DIODE	
D611	MA4062MTA	DIODE	
D612, 613	MA165	DIODE	⚠
D614, 615	1SR35200TB	DIODE	⚠
D616, 617	MA165	DIODE	
D618	MA4120	DIODE	
D619, 620	1SR35200TB	DIODE	⚠
D621	MA4150M	DIODE	
D901, 902	MA165	DIODE	
D903	MA4051MTA	DIODE	
D904, 905	MA165	DIODE	
D906	MA4120	DIODE	
D907	MA4056HTA	DIODE	
D908	MA4091-M	DIODE	
D909, 910	1SR35200TB	DIODE	
D911	MA4075HTA	DIODE	
D912, 913	MA700TA	DIODE	
D914-921	MA165	DIODE	
D922-924	MA4051MTA	DIODE	
D925	MA4062-H	DIODE	
D927, 928	MA165	DIODE	
D971, 972	RVD1SS133TA	DIODE	
		VARIABLE RESISTOR(S)	

Ref. No.	Part No.	Part Name & Description	Remarks
VR1, 2	EVNDXAA00B53	PLAYBACK GAIN ADJ.	
VR3, 4	EVNDXAA00B14	OVERALL GAIN ADJ.	
VR301, 302	EVNDXAA00B14	OVERALL FREQ. ADJ.	
VR303	EVNDXAA00B53	ERASE CURRENT ADJ.	
VR701	EVJ02BF01B14	REC. LEVEL CONTROL	
VR702	EVJ02SF01G15	BALANCE CONTROL	
VR901	EVNDXAA00B53	TAPE SPEED ADJ.	
		COIL(S)	
L1, 2	SLQX303-1KT	COIL	
L3, 4	SLQX272-1YT	COIL	
L301	SL09B4-K	COIL	
L302, 303	SL09B1-Z	COIL	
L401, 402	QLM9Z10K	COIL	
L851	RLQZB220KT-D	COIL	
		TRANSFORMER(S)	
T1	RTP1K4C009-V	POWER TRANSFORMER	(PP) ⚠
T1	RTP1K4B010-V	POWER TRANSFORMER	(E, EB, EG) ⚠
		OSCILLATOR(S)	
X901	EF0GC4004A4	CERAMIC FILTER(4MHz)	
		LCD(S)	
LCD1	EDD113CB6A2P	LCD	
		LAMP(S)	
LAMP1, 2	XAMR126S7A	LAMP	
		FUSE(S)	
F1	XBA2C25TB0	FUSE 250V T2.5A	(E, EB, EG) ⚠
		SWITCH(ES)	
S701	EVQ21405R	STOP	
S702	EVQ21405R	F. F.	
S703	EVQ21405R	REW.	
S704	EVQ21405R	F. PLAYBACK	
S705	EVQ21405R	R. PLAYBACK	
S706	EVQ21405R	CASSETTE TRAY;OPEN/CLOSE	
S707	EVQ21405R	REC	
S708	EVQ21405R	AUTO REC MUTE	
S709	EVQ21405R	PAUSE	
S710	EVQ21405R	AUTO LEVEL	
S711	EVQ21405R	COUNTER RESET	

Ref. No.	Part No.	Part Name & Description	Remarks
S712	EVQ21405R	MEMORY STOP	
S713	EVQ21405R	BLANK SKIP	
S714	EVQ21405R	REVERSE MODE	
S715	EVQ21405R	DOLBY NR(B, C)	
S716	EVQ21405R	MPX	
S851, 852	RSH1A005	DISC TRAY;CLOSE/OPEN DET.	
S901	SSH1230	POWER	⚠
S971	RSH1A89ZB-U	MODE	
S972	RSH1A90YB-U	HALF DET.	
S973	RSH1A90YB-U	ATS	
S974	RSH1A90YB-U	R. REC INH.	
S975	RSH1A90YB-U	F. REC INH.	
S976	RSH1A90YB-U	ATS	
		CONNECTOR(S) AND SOCKET(S)	
CN2A, 2B	RJS1A1703	CONNECTOR(3P)	
CN2P	SJT30643-V	CONNECTOR(6P)	
CN3	SJSD1105	CONNECTOR(11P)	
CN4A-4C	RJS1A1704	SOCKET(4P)	
CN4M	SJT31243-V	CONNECTOR(12P)	
CN5, 6	RJU003K010M1	SOCKET(10P)	
CN7	SJS50581BB	SOCKET(5P)	
CN11	RJP3G17ZA	CONNECTOR(3P)	
CN701, 702	EYF52BC	FUSE HOLDER	(E, EB, EG)
CP1	RJP5G18ZA	CONNECTOR(5P)	
CP5, 6	RJT003K010M1	CONNECTOR(10P)	
CP7	SJT30548BB1	CONNECTOR(5P)	
		JACK(S)	
JK1	SJF3069N	RCA PIN JACK	
JK2, 3	RJJ33T01	M3 JACK(BLACK)	
JK701	SJSD16	AC INLET	(PP) ⚠
JK701	SJS9236	AC INLET	(E, EB, EG) ⚠
JK702	RJS1A4802-B	AC OUTLET	(EB) ⚠
JK702	RJS1A4902-B	AC OUTLET	(E, EG) ⚠
JK702	SJS9331B	AC OUTLET	(PP) ⚠
		GND PART(S)	
E1	SNE1004-1	GND PLATE	

RESISTORS & CAPACITORS

Notes : * Capacity valuse are in microfarads (uF) unless specified otherwise, P=Pico-farads(pF) F=Farads(F)
* Resistance values are in ohms, unless specified otherwise, 1K=1,000(OHM) , 1M=1,000k(OHM)

Ref. No.	Part No.	Values & Remarks	Ref. No.	Part No.	Values & Remarks	Ref. No.	Part No.	Values & Remarks
			R405,406	ERDS2TJ242	1/4W 2.4K	R722	ERDS2TJ562	1/4W 5.6K
		RESISTORS	R407-410	ERDS2TJ562	1/4W 5.6K	R723	ERDS2TJ102	1/4W 1K
			R411,412	ERDS2TJ682T	1/4W 6.8K	R803	ERDS2TJ333	1/4W 33K
R1,2	ERDS2TJ225	1/4W 2.2M	R413,414	ERDS2TJ243T	1/4W 24K	R804	ERDS2TJ473	1/4W 47K
R3,4	ERDS2TJ104	1/4W 100K	R415,416	ERDS2TJ561	1/4W 560	R806	ERDS2TJ104	1/4W 100K
R9	ERDS2TJ103	1/4W 10K	R417	ERDS2TJ151	1/4W 150	R808,809	ERDS2TJ182	1/4W 1.8K
R10	ERDS2TJ103	1/4W 10K	R418	ERDS2TJ273	1/4W 27K	R810	ERDS2TJ331	1/4W 330
R11-14	ERDS2TJ101	1/4W 100	R501,502	ERDS2TJ220T	1/4W 22	R811	ERDS2TJ472	1/4W 4.7K
R15,16	ERDS2TJ153	1/4W 15K	R503,504	ERDS2TJ272T	1/4W 2.7K	R851	ERSB33J161U	1/4W 160
R17,18	ERDS2TJ564	1/4W 560K	R505	ERDS2TJ103	1/4W 10K	R852	ERSB02J512U	1/4W 5.1K
R19,20	ERDS2TJ103	1/4W 10K	R506	ERDS2TJ473	1/4W 47K	R853	ERDS1FVJ271T	1/2W 270 ⚠
R21,22	ERDS2TJ223	1/4W 22K	R507,508	ERDS2TJ393	1/4W 39K	R901	ERDS2TJ105T	1/4W 1M
R23,24	ERDS2TJ472	1/4W 4.7K	R509,510	ERDS2TJ473	1/4W 47K	R902	ERDS2TJ102	1/4W 1K
R25,26	ERDS2TJ103	1/4W 10K	R601,602	ERQ16NKWR11E	1W 0.11	R904,905	ERDS2TJ223	1/4W 22K
R27,28	ERDS2TJ102	1/4W 1K	R603,604	ERDS2TJ472	1/4W 4.7K	R906	ERDS2TJ103	1/4W 10K
R29,30	ERDS2TJ470	1/4W 47	R605	ERDS2TJ103	1/4W 10K	R907	ERDS2TJ472	1/4W 4.7K
R31,32	ERDS2EJ121	1/4W 120	R606	ERDS2TJ472	1/4W 4.7K	R908	ERDS2TJ103	1/4W 10K
R33,34	ERDS2TJ392T	1/4W 3.9K	R607	ERD2FCVG120T	1/4W 12 ⚠	R909-911	ERDS2TJ472	1/4W 4.7K
R35,36	ERDS2TJ152	1/4W 1.5K	R608	ERD2FCVG180T	1/4W 18 ⚠	R912	ERDS2TJ103	1/4W 10K
R37,38	ERDS2TJ272T	1/4W 2.7K	R609,610	ERDS2TJ102	1/4W 1K	R913	ERDS2TJ223	1/4W 22K
R39,40	ERDS2TJ223	1/4W 22K	R611,612	ERDS2TJ101	1/4W 100	R914	ERDS2TJ821	1/4W 820
R41,42	ERDS2TJ682T	1/4W 6.8K	R613	ERD2FCVG270T	1/4W 27 ⚠	R915	ERDS2TJ223	1/4W 22K
R43,44	ERDS2TJ223	1/4W 22K	R615	ERDS2TJ222	1/4W 2.2K	R916	ERDS2TJ821	1/4W 820
R45,46	ERDS2TJ182	1/4W 1.8K	R616-618	ERDS2TJ101	1/4W 100	R917	ERG1SJ150E	1W 15
R47,48	ERDS2TJ332	1/4W 3.3K	R619,620	ERDS2TJ472	1/4W 4.7K	R918	ERG1SJ180E	1W 18
R49,50	ERDS2TJ561	1/4W 560	R623,624	ERDS2TJ472	1/4W 4.7K	R919,920	ERDS2TJ472	1/4W 4.7K
R51,52	ERDS2TJ223	1/4W 22K	R626	ERQ16NKWR11E	1W 0.11	R921,922	ERDS2TJ223	1/4W 22K
R55,56	ERDS2TJ182	1/4W 1.8K	R627,628	ERDS2EJ121	1/4W 120	R923	ERDS2TJ821	1/4W 820
R57,58	ERDS2TJ104	1/4W 100K	R630,631	ERDS2TJ561	1/4W 560	R924	ERDS2TJ471	1/4W 470
R61,62	ERDS2TJ183T	1/4W 18K	R632,633	ERDS2TJ562	1/4W 5.6K	R925	ERDS2TJ1R0	1/4W 1.0
R63,64	ERDS2TJ393	1/4W 39K	R634,635	ERDS2TJ101	1/4W 100	R926	ERDS2TJ101	1/4W 100
R65,66	ERDS2TJ394	1/4W 390K	R636	ERDS2TJ100	1/4W 10	R927	ERDS2TJ223	1/4W 22K
R67,68	ERDS2TJ225	1/4W 2.2M	R701	ERDS2TJ821	1/4W 820	R928	ERDS2TJ821	1/4W 820
R301	ERDS2TJ1R0	1/4W 1.0	R702	ERDS2TJ102	1/4W 1K	R929	ERDS2TJ331	1/4W 330
R302,303	ERDS2TJ183T	1/4W 18K	R703	ERDS2TJ122	1/4W 1.2K	R930,931	ERDS1FJ120	1/2W 12 ⚠
R304,305	ERDS2TJ100	1/4W 10	R704	ERDS2TJ152	1/4W 1.5K	R932	ERDS2TJ222	1/4W 2.2K
R306	ERDS2TJ222	1/4W 2.2K	R705	ERDS2TJ182	1/4W 1.8K	R933	ERDS2TJ103	1/4W 10K
R307-309	ERDS2TJ561	1/4W 560	R706	ERDS2TJ821	1/4W 820	R934	ERDS2TJ472	1/4W 4.7K
R311,312	ERDS2TJ100	1/4W 10	R707	ERDS2TJ102	1/4W 1K	R935	ERDS2TJ222	1/4W 2.2K
R313,314	ERDS2TJ154	1/4W 150K	R708	ERDS2TJ122	1/4W 1.2K	R936,937	ERX1SJ5R6E	1W 5.6
R315,316	ERDS2TJ153	1/4W 15K	R709	ERDS2TJ152	1/4W 1.5K	R938	ERDS2TJ561	1/4W 560
R318	ERDS2TJ272T	1/4W 2.7K	R710	ERDS2TJ182	1/4W 1.8K	R939	ERDS2TJ332	1/4W 3.3K
R319	ERDS2TJ102	1/4W 1K	R711	ERDS2TJ222	1/4W 2.2K	R940	ERDS2TJ222	1/4W 2.2K
R326	ERDS2TJ222	1/4W 2.2K	R712	ERDS2TJ332	1/4W 3.3K	R941	ERDS2TJ103	1/4W 10K
R327,328	ERDS2TJ681	1/4W 680	R713	ERDS2TJ472	1/4W 4.7K	R942	ERDS2TJ471	1/4W 470
R329,330	ERDS1FVJ331T	1/2W 330 ⚠	R714	ERDS2TJ562	1/4W 5.6K	R943-945	ERDS2TJ103	1/4W 10K
R331-334	ERDS1FVJ391T	1/2W 390 ⚠	R718	ERDS2TJ222	1/4W 2.2K	R946	ERDS2TJ122	1/4W 1.2K
R335	ERDS2TJ103	1/4W 10K	R719	ERDS2TJ332	1/4W 3.3K	R948	ERDS2TJ472	1/4W 4.7K
R401-404	ERDS2TJ684	1/4W 680K	R720,721	ERDS2TJ102	1/4W 1K	R949,950	ERDS2TJ473	1/4W 47K

Ref. No.	Part No.	Values & Remarks
R951	ERDS2TJ153	1/4W 15K
R952	ERDS2TJ822	1/4W 8. 2K
R954, 955	ERDS2TJ100	1/4W 10
R956	ERDS2TJ223	1/4W 22K
R957, 958	ERDS2TJ393	1/4W 39K
R959	ERDS2TJ100	1/4W 10
R960	ERDS2TJ393	1/4W 39K
R961	ERDS2TJ223	1/4W 22K
R962, 963	ERDS2TJ393	1/4W 39K
R964	ERDS2TJ100	1/4W 10
R965	ERDS2TJ393	1/4W 39K
R966	ERDS2TJ100	1/4W 10
R967	ERDS2TJ101	1/4W 100
R968	ERDS2TJ823T	1/4W 82K
R969	ERDS2TJ393	1/4W 39K
R970	ERDS2TJ103	1/4W 10K
R971	ERDS2TJ102	1/4W 1K
R971A	ERDS2TJ221	1/4W 220
R972	ERDS2TJ473	1/4W 47K
R972A	ERDS2TJ183T	1/4W 18K
R973	ERDS2TJ153	1/4W 15K
R973A	ERDS2TJ221	1/4W 220
R974	ERDS2TJ472	1/4W 4. 7K
R974A	ERDS2TJ183T	1/4W 18K
R975	ERDS2TJ103	1/4W 10K
R975A	ERDS2TJ472	1/4W 4. 7K
R976	ERDS2TJ561	1/4W 560
R977	ERDS2TJ472	1/4W 4. 7K
R978	ERDS2TJ822	1/4W 8. 2K
R979	ERDS2TJ273	1/4W 27K
R980	ERDS2TJ123	1/4W 12K
R981	ERDS2TJ223	1/4W 22K
R982	ERDS2TJ392T	1/4W 3. 9K
R983	ERDS2TJ223	1/4W 22K
R984	ERDS2TJ272T	1/4W 2. 7K
R985	ERDS2TJ473	1/4W 47K
R986	ERDS2TJ103	1/4W 10K
R987	ERDS2TJ392T	1/4W 3. 9K
R988	ERDS2TJ272T	1/4W 2. 7K
R989	ERDS2TJ103	1/4W 10K
R990	ERDS2TJ392T	1/4W 3. 9K
R991	ERDS2TJ272T	1/4W 2. 7K
R992	ERDS2TJ220T	1/4W 22
R993	ERDS2TJ272T	1/4W 2. 7K
R995	ERDS2TJ683	1/4W 68K
R996	ERDS2TJ103	1/4W 10K
R997, 998	ERDS2TJ472	1/4W 4. 7K
R999	ERDS2TJ222	1/4W 2. 2K
		CAPACITORS
C1, 2	ECBT1H102KB5	50V 1000P
C3, 4	ECBT1H561KB5	50V 560P
C9	ECKR2H121KB5	500V 120P
C10	ECKR2H121KB5	500V 120P
C11, 12	ECBT1H102KB5	50V 1000P
C13, 14	ECEA1EK4R7	25V 4. 7U
C15, 16	ECEA0JU101B	6. 3V 100U
C17, 18	ECQB1H562JF3	50V 5600P
C21, 22	ECEA1EK4R7	25V 4. 7U
C23, 24	ECKR1H103ZF5	50V 0. 01U
C25, 26	ECBT1H101KB5	50V 100P
C27, 28	ECEA1HKR47	50V 0. 47U
C29, 30	ECQB1H822JF3	50V 8200P
C31, 32	ECQV1H273JZ3	50V 0. 027U
C33, 34	ECQB1H103JF3	50V 0. 01U
C35, 36	ECQV1H563JZ3	50V 0. 056U
C37-42	ECEA1EK4R7	25V 4. 7U
C43, 44	ECQB1H183JF3	50V 0. 018U
C45, 46	ECEA1CK100B	16V 10U
C47, 48	ECQV1H104JZ3	50V 0. 1U
C49, 50	ECBT1H820KB5	50V 82P
C301	ECQP1153JZ	100V 0. 015U
C302	ECEA1EK4R7	25V 4. 7U
C303	ECKR1H392KB5	50V 3900P
C304, 305	ECKW1H222KB5	50V 2200P
C306	ECKD1H682KB	50V 6800P
C307, 308	ECKR1H103ZF5	50V 0. 01U
C309	ECBT1E103ZF	25V 0. 01U
C310	ECEA1AU471	10V 470U
C311	ECBT1C472MR5	16V 4700P
C312	ECBT1H180J5	50V 18P
C313, 314	ECKT1H223ZF	50V 0. 022U
C315, 316	ECBT1H821KB5	50V 820P
C317, 318	ECBT1H121KB5	50V 120P
C319, 320	ECQV1H473JZ3	50V 0. 047U
C321, 322	ECQB1H223JF3	50V 0. 022U
C323, 324	ECQB1H103JF3	50V 0. 01U
C325, 326	ECKT1H122KB	50V 1200P
C327	ECEA1EK100	25V 10U
C328	ECBT1H180J5	50V 18P
C401, 402	ECKT1H122KB	50V 1200P
C403, 404	ECKD1H152KB	50V 1500P
C405-408	ECQB1H222JF3	50V 2200P
C409, 410	ECEA1HUR56B	50V 0. 56U
C411, 412	ECEA1HKR33	50V 0. 33U
C413, 414	ECKT1H122KB	50V 1200P
C415, 416	ECEA1EK4R7	25V 4. 7U
C501, 502	ECEA0JU101B	6. 3V 100U
C503	ECKR1H103ZF5	50V 0. 01U
C504	ECEA1CK100B	16V 10U
C505	ECEA1HK010B	50V 1U
C506	ECBT1H102KB5	50V 1000P
C601	ECKR2H682PE	500V 6800P
C602-604	ECEA1EU222B	25V 2200U
C605, 606	ECKR1H103ZF5	50V 0. 01U
C607, 608	ECEA1AU221	10V 220U
C611	ECKR1H103ZF5	50V 0. 01U
C613, 614	ECEA1CK100B	16V 10U
C615	ECEA1VU471B	35V 470U
C616	ECKR1H103ZF5	50V 0. 01U
C617, 618	ECEA1AU102B	10V 1000U
C619, 620	ECEA1AU221	10V 220U
C621	ECKR2H682PE	500V 6800P
C622	ECKR1H103ZF5	50V 0. 01U
C701	ECKR1H103ZF5	50V 0. 01U
C851	ECEA1CK100B	16V 10U
C901, 902	ECKR1H103ZF5	50V 0. 01U
C903	ECEA1HK010B	50V 1U
C904	ECKR1H103ZF5	50V 0. 01U
C905	ECEA1CN100SB	16V 10U
C906	ECKR1H103ZF5	50V 0. 01U
C907	ECEA1CN100SB	16V 10U
C908	ECKR1H103ZF5	50V 0. 01U
C909	ECEA0JU222B	6. 3V 2200U
C910	ECEA1HK010B	50V 1U
C911	ECEA1EK4R7	25V 4. 7U
C912	ECKT1H122KB	50V 1200P
C913	ECKR1H103ZF5	50V 0. 01U
C914	ECEA1HN010	50V 1U
C915	ECEA1HK010B	50V 1U
C917	ECEA0JU101B	6. 3V 100U
C918	ECKR1H103ZF5	50V 0. 01U
C919	ECEA0JU101B	6. 3V 100U
C921	ECQB1H822JF3	50V 8200P
C922	ECBT1H470J5	50V 47P
C923	ECEA1CK100B	16V 10U
C924	ECEA1HK2R2B	50V 2. 2U
C925	ECKD1H152KB	50V 1500P
C926	ECEA1AU101	10V 100U

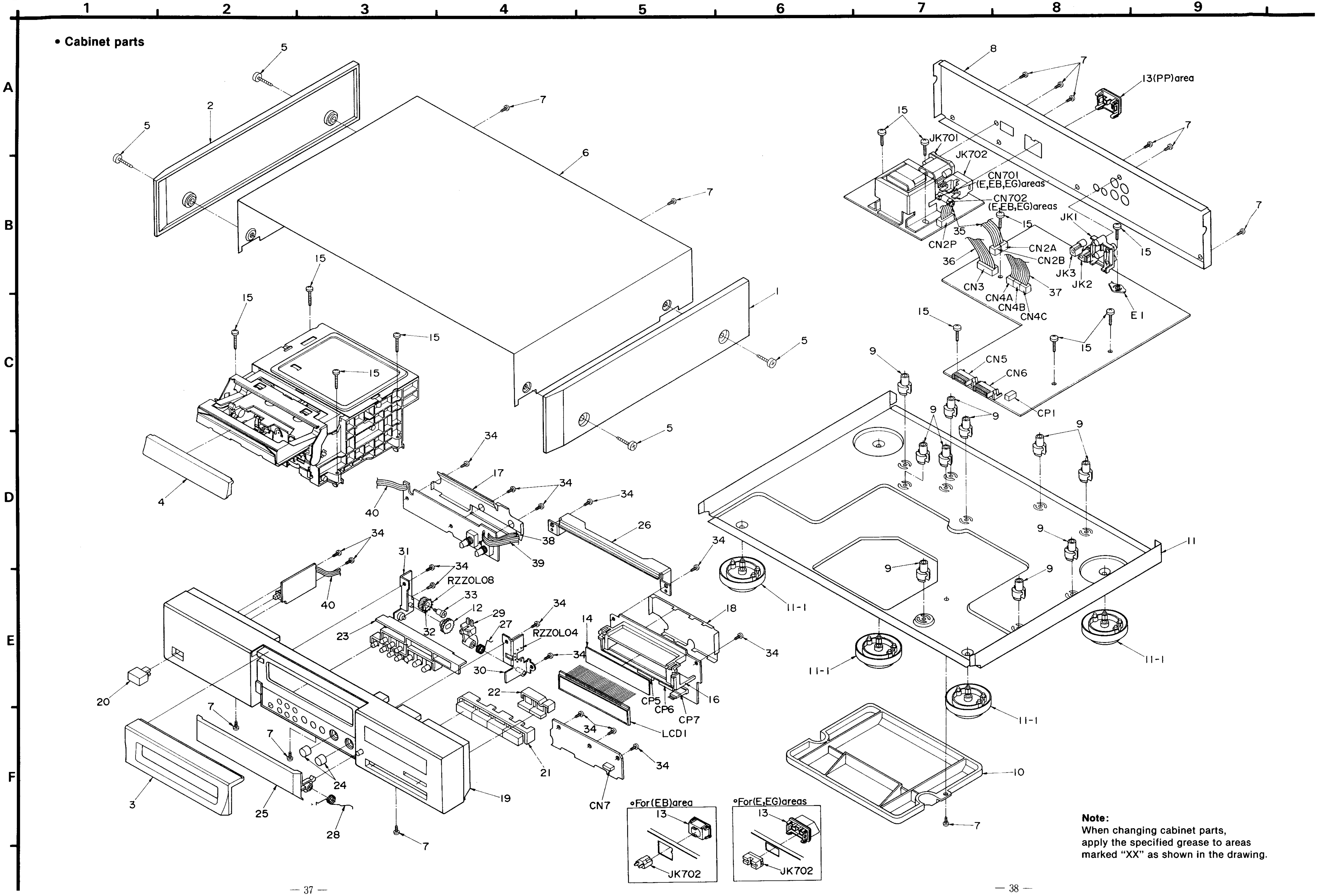
■ REPLACEMENT PARTS LIST

Notes : * Important safety notice:
Components identified by ⚠ mark have special characteristics important for safety. When replacing any of these components use only manufacturer's specified parts.
* The parenthesized indications in the Remarks columns specify the areas. (Refer to the cover page for area.)
Parts without these indications can be used for all areas.

Ref. No.	Part No.	Part Name & Description	Remarks
		CABINET AND CHASSIS	
1	RGK0330-S	SIDE PANEL(R)	
2	RGK0331-S	SIDE PANEL(L)	
3	RGK0345-S	CENTER ORNAMENT	
4	RGK0346-S	TRAY ORNAMENT	
5	RHD30016	SCREW	
6	RKM0154B-S	CABINET	
7	XTBS3+8JFZ1	SCREW	
8	RGR0111A-B	REAR PANEL	(PP)
8	RGR0111D-A	REAR PANEL	(EG)
8	RGR0111D-B	REAR PANEL	(E)
8	RGR0111G-A	REAR PANEL	(EB)
9	RKQ0089	P.C.B. HOLDER	
10	RKU0031	BOTTOM COVER	
11	RFKJSE10-S	BOTTOM BOARD ASS'Y	
11-1	RKA0045	FOOT	
12	RDG0151	INTERMEDIATE GEAR	
13	RJS1A4802-A	AC OUTLET COVER	(EB)
13	RJS1A4902-A	AC OUTLET COVER	(E, EG)
13	SJS9331A	AC OUTLET COVER	(PP)
14	RGH0062	SHEET	
15	XTB3+20JFZ	SCREW	
16	RMN0125	LCD HOLDER	
17	RFKNSE10-S	SHIELD PALTE ASS'Y	
18	RSC0178	SHIELD PLATE, LCD	
19	RFKGSE10E-S	FRONT PANEL ASS'Y	(E, EB, EG)
19	RFKGSE10PP-S	FRONT PANEL ASS'Y	(PP)
20	RGU0030-1S	BUTTON, POWER	
21	RGU0512A-S	BUTTON, OPERATION A	
22	RGU0513-S	BUTTON, OPERATION B	
23	RGU0515-H	BUTTON, OPERATION C	
24	RGW0111-H	KNOB, REC. LEVEL BALANCE	
25	RKF0185-S1	DOOR	
26	RMA0393	ANGLE	
27	RME0072	SPRING, FOOK	
28	RME0073	SPRING, OPEN/CLOSE	
29	RML0199	LEVER, FOOK	
30	RXA0086	ANGLE, OPEN/CLOSE	
31	RXA0087	ANGLE, DAMPER	
32	SMQ4096	EJECT GEAR	
33	SNE2120	SCREW	
34	XTB3+8JFZ	SCREW	
35	RWJ1806090QQ	FLAT CABLE(6P), W2	
36	RWJ0211180QQ	FLAT CABLE(11P), W3	
37	RWJ1812170QQ	FLAT CABLE(12P), W4	

Ref. No.	Part No.	Part Name & Description	Remarks
38	RWJ1803130KK	FLAT CABLE(3P), W8	
39	RWJ1804110KK	FLAT CABLE(4P), W9	
40	RWJ1803220KK	FLAT CABLE(3P), W10	
		PACKING MATERIAL	
P1	RPG0937	CARTON BOX	(PP)
P1	RPG0938	CARTON BOX	(E, EB, EG)
P2	RPN0436	PAD	
P3	SPSD152	ACCESSORIES BOX	
P4	SPP756	PROTECTION COVER	
		ACCESSORIES	
A1	RFKSSE10E-S	INSTRUCTION MANUAL	(E)
A1	RQT1092-Y	INSTRUCTION MANUAL	(PP)
A1	RQT1093-G	INSTRUCTION MANUAL	(EB)
A1	RQT1096-D	INSTRUCTION MANUAL	(EG)
A2	RQA0013	WARRANTY CARD	(E, EB, EG)
A2	SQX7179	WARRANTY CARD	(PP)
A2	RQA0049	WARRANTY CARD	for CANADA
A3	RQCB0169	SERVICENTER LIST	(E, EB, EG)
A3	SQX9129-1	SERVICENTER LIST	(PP)
A3	SQX9131	SERVICENTER LIST	for CANADA
A4	SFDAC05E03	AC POWER SUPPLY CORD	(E, EG) ⚠
A4	SJA172	AC POWER SUPPLY CORD	(PP) ⚠
A4	SJA188	AC POWER SUPPLY CORD	(EB) ⚠
A5	SJP2249-3	STEREO CONNECTION CABLE	
A6	SJP2257T	STEREO MINI CABLE	

■ EXPLODED VIEW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• Cabinet parts
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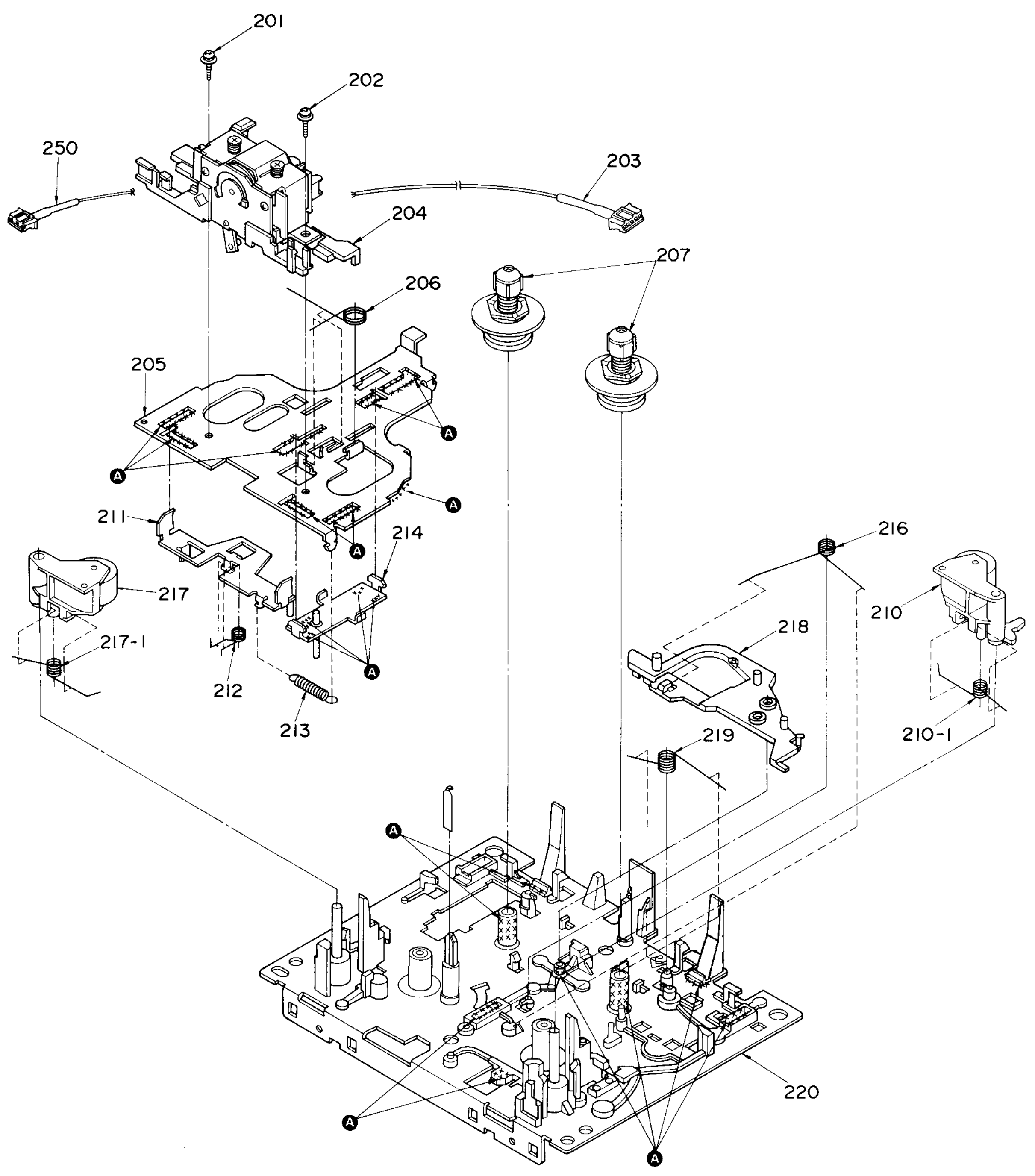
Note:
When changing cabinet parts,
apply the specified grease to areas
marked "XX" as shown in the drawing.

• Mechanical parts

(Top view)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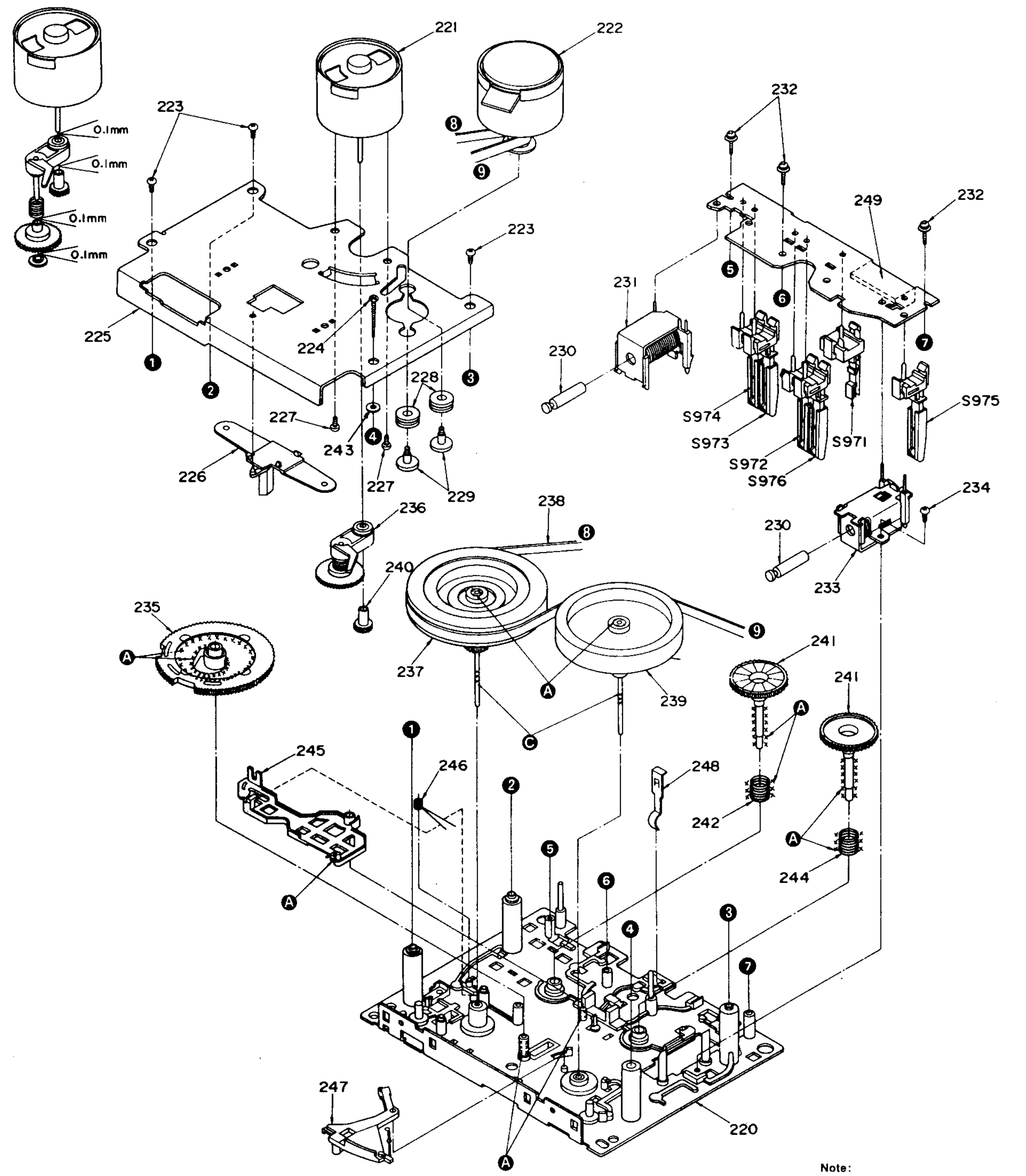
(Bottom view)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Note:
When changing mechanism parts, apply the specified grease to areas marked "XX" as shown in the drawing.

Ref. No.	Part Name	Part No.
Ⓐ	FLOIL AK-152	SZZOL18
Ⓒ	FLOIL947P	RZZOL02

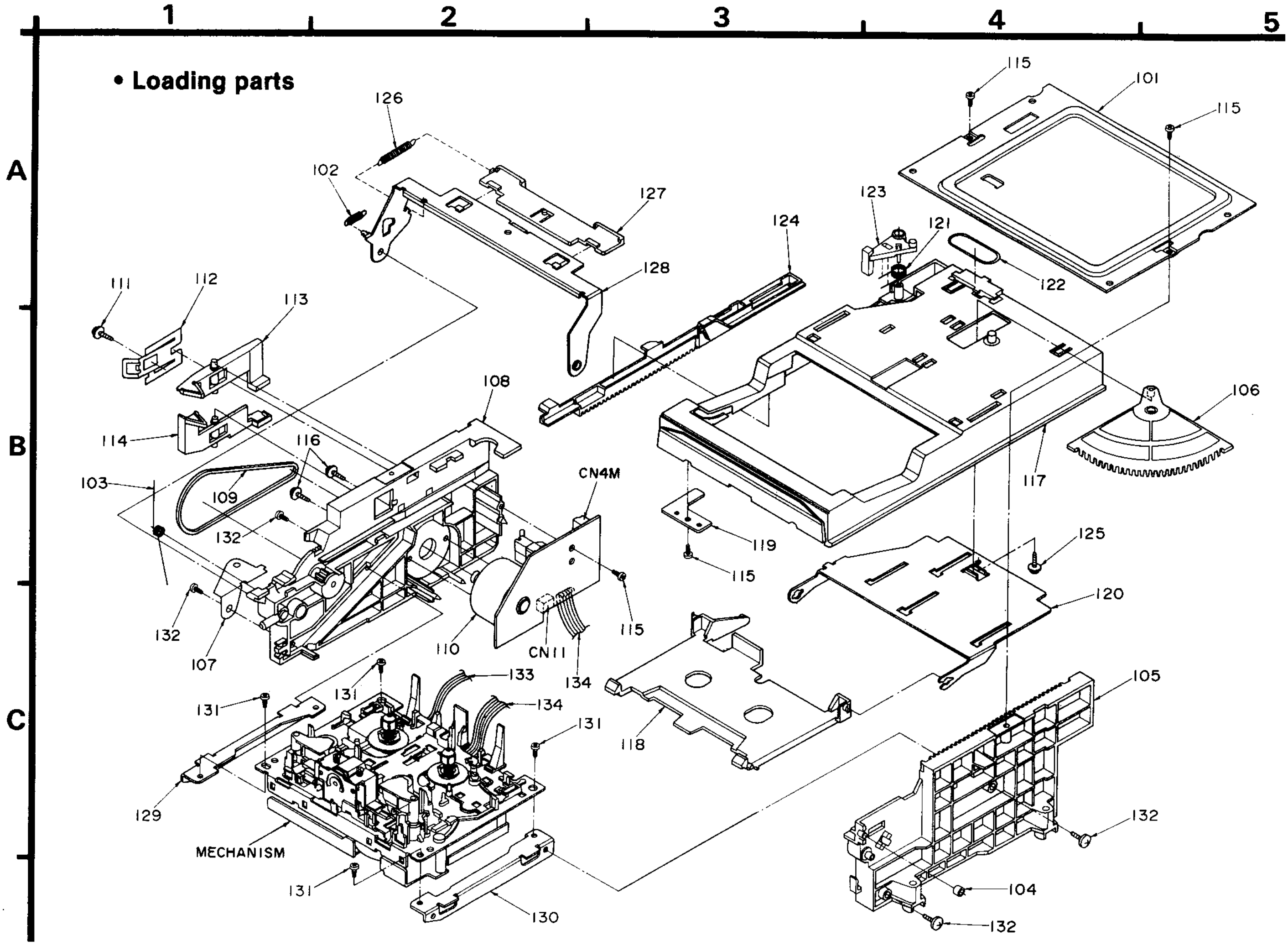
REPLACEMENT PARTS LIST

Ref. No.	Part No.	Part Name & Description	Remarks
		MECHANISM PARTS LIST	
201	XTW2+8L	SCREW	
202	XTW2+6L	SCREW	
203	REX0059	LEAD WIRE BLOCK(5P)	
204	RXQ0008	HEAD BLOCK (REC./PLAYBACK)	
205	RMA0047-1	HEAD BASE	
206	RUW139ZA	SPRING	
207	RXR0009	REEL TABLE	
210	RXP0004	PINCH ROLLER ARM(F)	
210-1	RUW140ZC	SPRING	
211	RXQ0077	HEAD BASE	
212	RUW143ZA	SPRING	
213	RUD105ZA	SPRING	
214	RXQ0078	MAIN ROD	
216	RME0020	SPRING	
217	RXP0005	PINCH ROLLER ARM(R)	
217-1	RUW141ZA	SPRING	
218	RML0040-2	BLAKE LEVER	
219	RUW142ZA	SPRING	
220	RXK0060	CHASSIS	
221	MMN-6F4RA88	REEL MOTOR	
222	RFKPSE10-S	CAPSTAN MOTOR ASS'Y	
223	XTN26+7J	SCREW	
224	XTN26+26F	SCREW	
225	RMA0048	FLYWHEEL PLATE	
226	RMD5014ZC	ANGLE	
227	XSN26+3	SCREW	
228	RHG3032ZA	RUBBER CUSHION	
229	RHD26002	SCREW	
230	RUB428ZE	MOVING IRON CORE	
231	RSJ0003	SOLENOID	
232	XTW2+8S	SCREW	
233	RXQ0011	BLAKE SOLENOID	
234	XTN26+4F	SCREW	
235	RDG0030	MAIN GEAR	
236	RXG0009	IDLER GEAR	
237	RXF0007	FLYWHEEL(F)	
238	RDV0015	CAPSTAN BELT	
239	1DW0054YA	FLYWHEEL(R)	
240	RDG0034	REEL MOTOR GEAR	
241	RXG0003	REEL TABLE GEAR	
242	RUQ112ZA	SPRING	
243	RHW31002	WASHER	
244	RUQ111ZB	SPRING	
245	RML0037	LEVER	
246	RUW147ZA	SPRING	
247	RML0038	LEVER	
248	RUS609ZC	TAPE PRESSURE SPRING	
249	RJS11T7ZA	CONNECTOR(11P), J971	
250	REX0069-1	LEAD WIRE BLOCK(3P)	

Ref. No.	Part No.	Part Name & Description	Remarks
		LOADING PARTS LIST	
101	RMA0376	UPPER BOARD	
102	RMB0171	SPRING	
103	RME0069	SPRING	
104	RMG0180	SPACER	
105	RMK0113	MECHANISM TABLE	
106	RML0190	GEAR	
107	RMQ0216	EARTH PLATE	
108	RFKRSE10-S	MECHANISM TABLE ASS'Y	
109	RDV0017	LOADING BELT	
110	REM0022	LOADING MOTOR	
111	RHD20010	SCREW	
112	RMC0106	SPRING	
113	RML0191	SWITCH LEVER A	
114	RML0192	SWITCH LEVER B	
115	XTBS26+8J	SCREW	
116	XYN26+F6	SCREW	
117	RGQ0057	TRAY	
118	RGQ0058	TAPE PLATE	
119	RMA0375	ANGLE	
120	RMA0377	PLATE SLIDER	
121	RME0070	SELECT LEVER SPRING	
122	RMG0159	ERASE RUBBER	
123	RML0187	SELECT LEVER	
124	RMM0067	LUCK	
125	XTB2+5F	SCREW	
126	RMB0200	SPRING	
127	RML0193	ANGLE	
128	RML0194	LEVER	
129	RMA0378	MECHANISM ANGLE(L)	
130	RMA0379	MECHANISM ANGLE(R)	
131	XTB3+6F	SCREW	
132	XTB3+10JFZ	SCREW	
133	RWJ1803050KK	FLAT CABLE(3P), W851	
134	RWJ1805120KK	FLAT CABLE(5P), W10A	

EXPLODED VIEW

• Loading parts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